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This is an account of what our American economy is, and what it does, with special regard to the stability of its operation and to the forces that control it.

The book has grown out of long experience with the sophomore year of the course in Contemporary Civilization in Columbia College. For study of our going economy, it is designed to take the place of an earlier two-volume work, *Main Currents in Modern Economic Life*. The latter book was, in turn, the successor of a still earlier two-volume text. The books which preceded this one passed through seven completely revised editions between 1932 and 1941. The long interval between the publication of the last of its predecessors and the appearance of this book has been due, in part, to our desire to gain as much perspective as we could on economic trends and developments in this country in the wake of World War II.

The present book retains what we believe to have been the strongest features of the earlier ones. These features are: (1) the analytical description of our economy in operation; and (2) the treatment of various aspects of the economy in terms appropriate to the mixture of both economic and political elements which they contain. In taking account of political influences and of questions of public policy, our hope has been to facilitate the study of contemporary political economy.

Yet this book differs from its predecessors in several respects. First, and most obviously, we are concerned here with a different period of time. Our purpose has been to throw such light as we can on our country's economic problems in the postwar period and on the backgrounds out of which these problems arose. Secondly, we have sought to make the problems we study stand out more clearly, and, to serve this end, have adopted methods of presentation that differ from those used in the earlier books. These different methods appear at many points; the strategic position occupied in the present book by an analysis of the national income is an example. Thirdly, we have attempted both to sharpen our presentation of particular controversial issues, and to broaden the frameworks in which issues are considered. The sharpening of particular issues is illustrated by the treatment of income distribution, monopolies, industrial conflict, conditions in agriculture, the status of consumers, insecurities of individuals and groups, operations of

our credit system, fiscal problems, and commercial policies. The broader areas in which controversial issues are considered are illustrated by the analyses given the general questions of full employment and economic planning.

We have neither attempted nor intended to create in this book a systematic and comprehensive body of economic theory. It often appears that the study of our going economy in the context of an elaborate theory of production, exchange, value, and distribution causes limitations to be laid, and rigidities to be fixed. In this case, we have attempted to provide each phase of the American economy that we study with a theoretical focus and organization appropriate to it, and numerous general relations of the various phases to each other are considered. Thus we have employed theoretical analysis, and reached generalized conclusions, in carrying out a purpose quite different from that of constructing a "body of economic theory."

In this connection, it may be appropriate to observe that the sophomore year of the course in Contemporary Civilization at Columbia serves as an introduction to both economics and political science (other books besides this one are read by students) and provides also a body of basic knowledge about social life which is believed to be essential to educated people who do not study intensively in either of these fields. From this study, those students who wish to go further in the field of economics proceed directly to an intermediate-level course in economic theory.

The course in Contemporary Civilization, out of which this book has grown, is conducted by members of the Departments of Economics, Government, History, Philosophy, and Sociology in Columbia College. Although this book was designed and written by present and former members of the Department of Economics, all of our colleagues who have participated in the course during the years since its inception have contributed, in various ways, to the work. The capacities, interest, and *esprit de corps* of this group of comparatively young scholars and teachers have been constant sources of stimulation and enjoyment in the development of the various features of the course, including this book. Specific contributions of members of this staff, and of other colleagues at Columbia and elsewhere, to developing the course out of which this book has arisen are stated in the preface to *Main Currents in Modern Economic Life*.

The collaboration that has gone into the writing and editing of this book makes difficult the precise allocation of certain parts to certain people. Among our colleagues who have worked with us, the original writing of particular parts is distributed as follows: Courtney C. Brown wrote Chapter 23; Robert L. Carey wrote Chapters 17, 24, 25; Lyle C. Fitch wrote Chapter 26; C. Lowell Harriss wrote Chapter 18; Hubert F. Havlik wrote

Chapter 13; Oleg Hoeffding wrote Chapters 27, 28, 29; Donald W. O'Connell wrote Chapters 3, 6; Harry Schwartz wrote Chapter 4; Boris M. Stanfield wrote Chapters 14, 15; George D. Wilkinson wrote Chapter 5; C. Ashley Wright wrote Chapter 2.

Our own collaboration in writing has been especially close. Applying again the test of "original writing," Mr. Barger wrote Chapters 7, 8, 9, 16, 21, 30; Mr. Taylor wrote Chapters 1, 10, 11, 19, 20, 22. Both of us "originally wrote" Chapters 12, 31, 32.

With the exception of Mr. Wilkinson, who is an engineer and student of philosophy, all of the participants in the book are present or former members of the Department of Economics at Columbia.

We are deeply indebted to some of our present and former colleagues who participated in the writing of predecessors of the present book. Parts of manuscripts written originally by John F. Fennelly, Louis M. Hacker, and Carl T. Schmidt appear as parts of Chapters 10, 4, and 16, respectively.

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We are under a lasting obligation to the late John J. Coss and to Joseph McGoldrick, who took part in the planning and development of the course out of which this book has arisen, and to the late Herbert E. Hawkes, Dean of Columbia College, whose educational statesmanship and administrative tolerance played decisive parts in shaping the program of general education to which this book is a modest contribution.

HORACE TAYLOR
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Columbia University
January 1949

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SECTION ONE

PROBLEMS OF THE AMERICAN ECONOMY

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INTRODUCTION

Every nation has its trials and each generation its perplexities. These are he materials of history. The successive trials and perplexities that beset na- ions and people are new in their special features, yet they invariably have oots running into the past. There also is a quality of sameness in the prob- ems themselves, and some similarity in the ideas and devices—often discred- ed ones—to which people turn in their extremities. This is not to assert the onic theory of history that men can do no more than repeat their old mis- kes; nor is it to affirm the fallacious doctrine that history repeats itself. It eans only that human nature remains about the same as to both its aspira- ons and its limitations.

To the questing mind, however, there is little satisfaction in knowing at other periods of social criticism, of social stress, of revolution, have isted before our own. And little comfort is contained in knowing that we the United States are materially better off than the people of any other untry. There is no escaping the unpleasant facts: the criticisms, the stresses, revolutionary tensions are here. They are revealed in our everyday con- ns at home; they confront us constantly in our dealings with the foreign ples whose remoteness from us and our affairs has suddenly become so ch less than it used to be. Knowing as we do that people of all times have ed kindred problems and perplexities, we still ask ourselves why our own m so much larger than have most of those in the past.

Such assurance as we get from history lies in the fact that other people e studied their problems and have thought them through to acceptable tions. To them in their times and places, as to us today, the solutions that found must often have seemed unorthodox and disturbi-

never know whether the solutions found in the past, or the ones that may be found in our time, are the best of all possible ones. Yet a working principle can be adopted: the first need is for knowledge of the relevant facts, trends, and relationships. Some of the more basic of these matters, as they apply in the economic sphere, are presented in this book.

In this study of the American economy in operation, special importance will be attached to two aspects of our contemporary economic life:

Stability. In the first place, we shall be concerned with the stability of our economy and with many factors which are involved in instability. The stability in which we are interested is that of the economy as a whole, as measured by the employment of productive resources, the size and distribution of the national income, the volume of production.

Control. In the second place, we shall examine the controls that apply to our economy and the purposes that they severally serve. This will involve study of competitive and monopolistic forms of control, and also of those forms that arise from custom, convention, and law. We will be concerned especially with the interrelations and interactions between specific forms of control and economic stability.

A glance at the table of contents will suggest the ways in which stability and control are studied in this book. A number of chapters are devoted to situations which have come about quite recently, and to the probable effects of particular current programs and policies. Attention also is given to the backgrounds out of which the current problems and policies arose. From this point of view, the most recent economic and political developments represent the latest phases of trends which extend back much farther than the New Deal, the recent war, or the present world crisis. Social change appears to consist of more or less co-ordinated, more or less synchronized, adjustments in the ways in which people think and act as members of social groups.

Many of the problems which we shall study are of great difficulty. Even the larger aspects of our economy—such as the volume of production, the national income, the scale of consumption, the volume of saving, the rate of investment, the volume of employment, the general price level—have little meaning except in terms of their relations to each other. If we break these large categories down into their components—as, for example, the volumes of employment in all different occupations, or the prices of each of the different commodities and services that are exchanged in the market—the relationships become both more numerous and more complicated. Because of this, we may decide that some of the easy and facile solutions to economic

problems that are offered from many sources today would in practice prove ineffectual or positively harmful.

Yet much will have been accomplished if we gain an understanding of what the problems are and of the settings in which they exist. To do this requires knowledge of facts and relationships, and avoidance of a priori opinions and snap judgments. The conservative's inertia and the reformer's zeal are alike of little use unless they are tempered with understanding. Mr. Micawber waited patiently for something to turn up. But nothing ever did. And Don Quixote, fired by dreams of heroism, couched his lance and bore down upon the windmills of the plain, thinking that they were enemies. But Don Quixote did not know the facts.

CHAPTER ONE

The problems with which we begin

This book is concerned with economics. More concretely, it is concerned with economic affairs in the United States, and with some of the problems which arise in this connection.

Economics deals with economy and with institutions. It deals with economy in that it studies primarily the ways in which scarce productive resources are used and the results that follow from their use. This involves investigation of the markets through which productive resources are employed, goods and services are exchanged, and incomes are distributed.

Economics deals with institutions: in doing so it considers the customs, laws, folkways that govern our economic life. These are our ways of organizing and directing our economic affairs and our attitudes toward these affairs. The principal institutions of our liberal economic society (besides the modern technology, which it shares with collectivist economies) are (1) the system of private business operated for profit, (2) the exchange of goods and services in free markets involving the elaborate use of money, (3) the remuneration of a majority of workers through wages and salaries fixed by contract, and (4) the principle of individual initiative.

Thus this book deals with problems concerning economy and institutions. It does not pretend to deal with all such problems, or to go into all the details that might be gone into with regard to the problems it treats. It does, however, present a fairly systematic description and analysis of fundamental economic conditions in the United States, and raise for consideration some of the insistent economic problems of the present.

The economic system of the United States differs more or less from that of any other country. It is similar to those of other countries in the sense that it has the same general kinds of productive resources. These are:

) lands, minerals, and other useful things provided by nature; (2) a work
g force of diverse skills and capacities; and (3) an accumulation of pro
ctive equipment in the form of factories, apparatus used on farms, rail
ıds, merchandising establishments, stocks of raw materials and finished
ods, and other useful things created by man. It differs more or less from
: economic systems of other nations in its organization and motivation, i.e.
its institutions. Its differences along these lines do not make our country's
ıomic system absolutely, or necessarily, better or worse than others
e differences are more properly to be regarded as products of what most
our people have believed to be their needs and their political and cul-
ıl aspirations. In short, these differences are products of history.

Long ago, as an act of deliberate choice which was a natural outcome
heir European origins, the people of this country created a liberal eco-
ıic system. Since that time the same people, and their descendants and
:essors, have repeatedly reaffirmed the principles of this system. They
have modified and adapted these principles according to what a ma-
y of the people believed to be the requirements of the time. As a result,
economic life of the United States consists today of a basically liberal
:m in which a great variety of modifications exist as a result of public
private action. The modifications are so numerous and so varied that
:antial parts of this book are devoted to examining them. The general
:iples of a liberal economic system can, however, be stated fairly briefly.

LIBERAL ECONOMY

Widespread and habitual ways in which people think and act with re-
to making a living and living together constitute the economic and
:al *institutions* of the community. In the United States the whole set
:itutions constitute what commonly is called "the liberal system." The
sanctions upon which the institutions rest are primarily those of cus-
ıut much of the custom has been codified and made specific by law.
effect has been to give certainty to relationships among individuals,
ıo to those between individuals and the community or the state.

was stated above that the principal institutions which characterize
ıic life in a liberal economy are the system of private business oper-
r profit, the exchange of goods and services in free markets involving
ıorate use of money, the wages system, and the principle of individual
'e. The last of these, individual initiative, has been called both the
and the vindication of the present economic order. The argument

runs that each person, by serving best his own interests, will also of necessity serve best the interests of everyone else. Adam Smith, the great eighteenth-century champion of economic liberalism, likened individual initiative to an "invisible hand" which guides economic activities towards greatest benefit to the community. Of the individual participant in economic affairs Smith said that "the study of his own advantage naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to society," and that "by pursuing his own interest he frequently promotes that of society more effectively than when he really intends to promote it." If these claims of Adam Smith appear to overstate the case, it should be remembered that they were written in criticism of the mercantilistic restrictions of eighteenth-century England and not as a description of what actually occurred after the restrictions had been removed. Smith, while a prophet of the modern liberal economic system, did not live long enough to witness its full operation.

Economic liberty (or *laissez faire*, as it traditionally is called) means simply that people are able to express their economic choices without interference from agencies or creatures of the state. Thus it leaves individuals free to choose the occupations they will enter, the ways in which they will invest their capital, and the goods and services they will consume. But it gives no guarantee that people may successfully choose anything they might like. It always was recognized, for example, that merely being free to choose would not enable a poor man to become a banker, a cripple to become a professional wrestler, or a beggar to have caviar for dinner. Property rights also have limited the range of possible choices people might make. Thus, a man who wants a pair of shoes is not free to use a factory belonging to someone else in order to make a pair for himself. Rather less obvious restrictions than these have existed in large numbers, and have not always received the recognition and attention that they deserve. The liberal principle simply assumes that people will choose to use such capacities and resources as they possess in ways which will yield them greatest satisfaction.

It traditionally has been believed about a liberal economy that adjustments take place automatically throughout the entire economic system. Such adjustments are expected to result from the choices made by people in accordance with their own self-interest. Thus it is assumed that people will not choose to enter already overcrowded occupations, or to invest their capital in industries which already have capacity in excess of profitable operation, or to buy expensive commodities when cheaper substitutes will serve equally well. A second set of automatic adjustments is assumed to apply to

price changes. When "overproduction" of some commodity occurs, its price will decline and production will diminish. When in a particular industry, there is severe unemployment, wages will decline and employers will give jobs to more workers. Other automatic adjustments are assumed, but the foregoing will serve as illustrations.

The principal conclusions that follow from all these assumptions are: (1) that the economy tends always toward "equilibrium," in the sense that ıll demands, all supplies, and all prices tend to come into appropriate relaions with each other; (2) that the benefit to each individual participant in he economy tends to be maximized, and that this benefit measures accuately the value of the individual's contribution to production; and, of reatest importance, (3) that the individual initiative which is permitted and ostered by a liberal economy will result in the fullest use of productive reources, in the most efficient ways, to produce the appropriate kinds and ptimum quantities of the goods and services desired by the community.

Similar conclusions are reached with regard to dealings between naons. Just as the benefit of the individual participant tends to be maximized ı a liberal economy, the benefit to each nation from international trade nds also to be maximized. By the maintenance of free trade among the ıtions, it is argued that each country will specialize in producing just those ɔmmodities in the production of which it has an economic advantage by ɔmparison to other nations, and by comparison also to other commodities hich it might produce. By exchanging its advantageously produced comɔdities for those of other countries, each nation will gain the greatest posɔle benefit from international trade.

VIATIONS FROM ECONOMIC LIBERALISM

The doctrine of economic liberalism has been attacked on a variety of ɔunds, two of which are especially important to our further study. The ɜt of these concerns the concept of human nature on which the doctrine ts. This concept, known as "hedonism," holds that the economic behavior free people is motivated principally by their desire to secure "pleasure" l to avoid "pain." Most psychologists have rejected hedonism, and many nomists have pointed out that the rationality, planning, and restraint inved in the lives we lead today do not appear to lead to a maximum of ɜasure" and a minimum of "pain." And well-known facts of our econ- make it appear that the "self-interest" of a person may cause him to beıe a member of a powerful bargaining organization (e.g., a trust or a ɔn) instead of leading the life of a rugged individualist. More positively,

it has been suggested that, whatever innate drives to action people may have, the general pattern of their behavior is greatly influenced by the institutions of the society into which they are born and in which they live.

The second of these attacks on economic liberalism is directed against the passivity of the state. It is argued that there are many—and increasing—interests that citizens of the state have in common, and that these interests can be served only by collective action. Many examples of such common interests, and the arguments as to what should be done about them, will appear in later chapters.

The rationale of economic liberty has been presented here in its broadest terms. As a principle of economic organization, it has operated for only about a century and a half. Many countries have not adopted it, and it never has been completely adhered to in any country. Of the problems of adjustment which exist here and now, some may be traced as clearly to policies which deviate from liberal premises as to the failure of the automatic operations of a liberal economy.

Even in its "purest" form, the doctrine of *laissez faire* did not leave all economic activities and responsibilities to private initiative. Thus Adam Smith argued in 1776 that the state's attitude toward economic affairs should be that of a "passive policeman." He would have the state perform only three sets of functions, but they are highly important ones. In his view, the state should: (1) defend its citizens against aggression by a foreign power; (2) protect its citizens against injury to their persons and property by individuals or groups within the state; and (3) perform services which are desirable to the community at large, but which either cannot safely be entrusted to private hands or do not lend themselves to profitable performance by private initiative. This last set of functions is exemplified by the building of roads and canals, the maintenance of sewage systems, the provision of education and of health-promotion services.

To the extent that there exist tariffs, bounties, subsidies, social insurance, and the regulation of industries by the state, the principle of *laissez faire* is restricted or denied. Such action by a government coerces people—even though it also may benefit some, or all, of them—in that it causes them to do things which they would not otherwise have done. But powerful nongovernmental economic organizations (large corporations, labor unions, trade associations, etc.) may take action which also is coercive. Although the coercive power of any single organization of this kind usually does not extend as far as that of a government (some of the largest of them certainly will compare in coercive power with a few of our states), the powers which all of them together are able to use are enormous. Thus we may observe

that strong economic organizations often seek to vindicate their own exercise of economic power (and to keep the state from checking their exercise of it) by appeal to the principle of *laissez faire*, even though their own exercise of power infringes upon the liberties which other persons and groups are supposed to enjoy.

The economies of large-scale production and the fact that many commodities produced today could not be produced at all except in big shops and factories have led to the building up of larger and larger business concerns. These giant concerns have sometimes eliminated competition; in other cases they have seriously modified it. Such elimination and modification of competition have given these concerns power to control, within some limits, the prices of things which they sell and of things which they buy, and also to determine how much of these things shall be bought and sold. Such controls constitute one kind of coercive action by powerful business concerns. The same sort of control has been created and used by some organizations of wage earners and of farmers.

Although we in the United States recently have modified our economy in a number of—to us—new ways, economic liberty continues to be our central principle of organization. It remains, in the thinking of most people, the "normal" condition from which we have, in various particulars, "deviated." The deviations have occurred for a variety of reasons (promoting employment, strengthening the bargaining position of the weak, protecting bank depositors against loss, etc.) and do not seem to follow a positive pattern of their own. They appear to be exceptions to the central principle rather than denials of it.

The most forthright denial of economic liberalism is offered by economic authoritarianism. According to the authoritarian principle, individuals have no rights to be free from restriction and regulation by the state; they have, instead, obligations which they must fulfill to the community, and the function of the state is to enforce the observance of these obligations. Individuals are not left free to choose the occupations they will enter, the ways in which they will invest their capital, or the goods and services they will consume. These restrictions may consist in direct coercion of all members of the community or—what is more likely—in giving preferment to members of the group in power at the expense of other groups. In the latter event the group in power has something more than economic liberty; it has authority which it can use against other people for the attainment of the group's own ends. As regards the "other people" it must be clear that they have something less than economic liberty.

It was pointed out above that adherence to the principle of economic liberty never has been complete in any country. It also should be clear that there never has been an authoritarian economy in which the great majority of people have been deprived of *all* opportunity to choose. The distinction, however, is a fundamental one: The exercise of choice, which, in a liberal economy, is an established *right* of the individual is, in an authoritarian economy, a *privilege* which some may enjoy to a wider extent than others, and which all enjoy only at the pleasure of the state, i.e., at the pleasure of those persons who control the state.

THE MARKET

Later parts of this first chapter will present explanations and illustrations of the problems with which this book is concerned. Before turning to them, however, we need to make a brief examination of the market. The reason for this is that all of the economic conditions to be considered in this and following chapters exist in, or are closely related to, the market.

Economic life today is affected, more than by anything else, by the fact of exchange. The fact itself is not new; the existence of any form of economic society is predicated upon exchange. Under feudal conditions, for example, holders of land exchanged the right to use the land for goods and services which the users of the land gave in return. Even among primitive people who are prevented by taboo and tribal sanction from driving bargains with each other, it often is customary to exchange "gifts," and custom determines what kind and how much of one thing is to be "given" in return for a certain quality and amount of another thing.

Thus it is not the *fact* of exchange that particularly characterizes contemporary economic life; it is rather the variety and the extent and the interlocking of exchange transactions. The sum of these transactions is composed of countless exchanges of goods and services among geographically separated and occupationally varied buyers and sellers; it provides the basic organization of our economic life. It is this aggregate of related transactions that is meant by the generalized name, "the market." As a result of our day-to-day experiences, we are so accustomed to the scale and scope and variety of these exchanges that we have come to take them for granted. We rarely consider the almost infinite number of complex relationships—of people to people and of people to things—which they represent. An illustration may be drawn from almost anything that we buy or sell. We will select such a case at random.

V THE MARKET ORGANIZES PRODUCTION

Let us suppose that a certain Mr. Smith buys a new automobile. Before ıg so he visits several dealers who offer different kinds of cars for sale. makes careful comparisons of the automobiles shown him by the several ers; he compares their mechanical excellence, their comfort and ease of ing, their safety, their appearance, their prices, the "trade-in-value" the ous dealers impute to his old car. After having considered these several ors as they apply to the different automobiles, and having related them ıis own needs and desires, Mr. Smith buys the car of his choice, either giving his check for the full amount due, or by agreeing, in writing, to the amount due in installments. This is an ordinary transaction. It also is final one in a very long and complicated series of transactions extending into space and time.

To make this automobile and to have it on hand where and when Mr. ith wanted it required the co-operation of many thousands—even mil- ıs—of people. The particular automobile is assembled by a large number workers, using machinery made by other people, and parts for assembly le by still others. These parts in turn are made of materials brought m many different parts of the world, where they were produced by ge numbers of other people. Numerous agencies of transportation and mmunication contributed to the process. To trace the entire series of op- tions and transactions back to their beginnings would not be possible. e are dealing with materials which are used to make other materials, with chines used to make other machines, with workers who make the things rked with and worked on by other workers.

It must be clear that each phase of this complicated pattern of co- eration involved transactions similar to that between Mr. Smith and the ıler in automobiles. Wage earners in a great many different fields of pro- ction exchanged their labor for money wages; investors exchanged their pital funds for rights as owners or creditors of productive enterprises; ners of land containing deposits of iron or coal sold iron and coal com- nies the right to exploit their properties; railroad companies sold their vice of transporting raw materials and finished products; sequential pro- cers bought from, and sold to, each other; makers of industrial equipment ld their products to manufacturers who needed them for their productive erations. If we were to make a complete analysis of the people and firms at had participated directly or indirectly in making Mr. Smith's new car, d in having it ready when and where he wanted it, the list of participants

would clearly comprise a sizable segment of the world's productive organization.

An automobile is more complicated than most of the other commodities that people commonly buy, and its production involves co-operation by more specialists than is true with most other commodities. But if we were to make a catalogue of even the ordinary things that a single person buys in the market today, and were to trace all of the participants in the process of making these things and getting them to him, there would prove to be millions of people and billions of dollars' worth of property engaged in the process.

THE PRODUCTIVENESS OF THE MARKET

Some conclusions can now be reached concerning the significance of the market process just described. In the first place, the market gets the goods produced and gets them to people who want them and have the means to buy them. The modern scale on which this occurs—to us a commonplace matter—probably would have seemed to the people of colonial America little less than miraculous. What most often impresses us about it today is that it does not work as effectively as we should like. It does not result in the continuous production of as great a volume of goods and services as it conceivably could. Or—to state the matter somewhat differently—it does not result in the continuous employment of productive resources as fully, or as effectively, as it conceivably could. Unemployment, waste, exploitative power given to some by their strategic situation, recklessness in speculating with the welfare of others, and poverty are conditions associated with the market system. That it works as a system is a fact that makes for complacency; that it also, as a system, has the imperfections mentioned above compels our attention and our concern.

Both actually and potentially, however, this system of organization through the market is extremely productive. The co-operation of specialists described above represents a division of labor more elaborate than ever existed before. Greater production results from the higher specialization of both people and equipment. The wide spread of the market permits great specialization and enables people to secure the material benefits that result from it.

Let us consider again the case of Mr. Smith. Perhaps he is an expert accountant. But, supposing that he were a "jack of all trades," would he be able to make for himself an automobile such as the one he bought? Probably he could not, even if he devoted his entire life to it; certainly he could not, if

he had to make his own tools and produce and process his own raw materials. And, if he tried to do so, wouldn't he be prevented by the mere fact that he had to spend some of his time and energy in producing such necessities as food and clothing? But our comparison is an extreme one; we have assumed that Mr. Smith makes for himself everything that he has. A less extreme assumption would be that he is a member of a community of specialists consisting of a thousand people. Would he then be able to get an automobile? It is extremely doubtful; it still would be doubtful, even if we assumed a community a hundred or a thousand times as large. Yet, in our highly elaborate and productive system, Mr. Smith can sell his specialized services to an employer who wants them; with his salary he can buy and maintain an automobile, and also can buy and enjoy many other things. And, in the process of earning his salary, Mr. Smith is himself taking part in the cooperation of specialists that has been described.

THE IMPERSONAL NATURE OF THE MARKET

In the second place, the modern market is spontaneous and impersonal. There is no directing head to determine what things are to be produced, or in what quantities. Each independent unit in the system (each worker, each provider of capital, each business enterprise) has some freedom of choice—though probably not complete freedom—in deciding the extent of its own participation. But no single directing head decides what is to occur in the system as a whole. Thus all of the elaborate organization of materials, services, and facilities that was described in connection with Mr. Smith's automobile occurred spontaneously. This spontaneity results not only in production, but in co-ordination, synchronization, articulation of the activities of all those who participate in the productive process.

It was said that the market operates impersonally. It is quite possible that none of the thousands of specialists who had, directly or indirectly, taken part in the production of Mr. Smith's car knew, or even had heard of, Mr. Smith. Rubber-plantation laborers in the East Indies, wool growers in Australia, iron miners in Minnesota, even the local dealer in automobiles, had no occasion to know Mr. Smith or even to know in advance that he would be "in the market" for a car. All that the rubber-plantation worker needed to know in this connection was that his employer had given him a job at a specified wage. All that the employer needed to know was that he probably could sell his rubber crop to a local buyer at a price sufficient to cover his out-of-pocket costs. And so, through long series of such transactions, the process went on, with the parties to each transaction interested

only in their own costs and their own receipts. That at some place, at some time, some consumer would buy, in some form, the things that they had produced was simply taken for granted. Whether it happened to be Mr. Smith was of no importance.

This impersonal quality of the market is, perhaps, an unescapable accompaniment of the benefits in the way of greater material production which the market has yielded. Since, however, the processes that occur in the market—primarily those that concern economic stability and control—are studied in some detail in this book, we should not pass over the impersonal quality of the market without noting some of the more general ways in which it makes its imprint on people.

THE IMPERSONAL MARKET AND OUR SYSTEM OF VALUES

The pecuniary motives which predominate in the impersonal market have striking counterparts in other phases of contemporary life. Many of the social values by which our ancestors set store have been displaced and superseded by purely pecuniary values. Thus the old established criteria of goodness, beauty, and appropriateness have given way, to a large extent, to preferences for the expensive, the "rich-looking," and the ostentatious. Social prominence, like personal power, frequently is measured more accurately by the kind of automobile a person rides in than by his usefulness to the community. This is essentially what is meant by critics who refer to "the modern materialism." An American economist, Thorstein Veblen, has tellingly labeled much of this display "conspicuous waste."

Such recasting of values and incentives certainly is facilitated by the far-flung and impersonal market of today. Under frontier conditions, or in small marketing areas, the person who accumulates a fortune larger than those of his neighbors (although if he inherits it the situation probably is different) is subject to suspicion and is likely to be written down as a poor citizen. The assumption is that he has made his wealth at the expense of the other members of the community. Public-spiritedness, loyalty, and generosity are the traits that are most respected. But when, as at present, the market extends even to the most remote parts of the earth, and transactions occur principally between people who are not acquainted with each other, the taboos and sanctions mentioned above have little, if any, effect.

Indeed, such contacts as people have with each other under conditions of industrial urbanism—itself an aspect of the greatly expanded market—tend to promote the less fundamental personal values and incentives. In a frontier community people know the abilities, tastes, and capacities of each

ıer. As larger and larger numbers come to live in towns and cities, and as ɔroved means of transportation come both to expand the market and to ıble people to travel more widely, they come to associate less with those o know them well and more with complete or comparative strangers. der these circumstances criteria of personal worth come to be more ıerficial. And an accepted mode of making a favorable impression on h strangers is to give the appearance of prosperity and to display ex- ısive habits and tastes.

ɔBLEMS OF INDIVIDUAL ECONOMIC SECURITY

The economic problems that concern people most directly are those : affect the size and security of their incomes, the conditions of their em- ɣment, the value of their investments, their material rights and privileges gainst the rest of mankind. For this reason we commence our consider- n of specific problems with a brief description of what is involved in eco- ıic security and insecurity.

The most immediate economic need that people have is for money in- ıes sufficient to provide at least the material essentials of civilized exist- ɜ. Such a requirement is greater than for mere food and clothing and ter against the elements. Civilized existence implies a settled habitat, the ıtenance of standards of health and sanitation, opportunities for recrea- and intellectual and artistic development, and—in addition to the basic ɜssities mentioned above—the possession and use of those conveniences of which have come to be regarded as "conventional necessities."

But economic security involves even more than the money incomes ɜssary to buy these material things. It requires also a reasonable certainty the income can be gained continuously, and that people even have a hope that they can, by working and saving and persevering, improve material lot. To the extent that any of these conditions are lacking, ɜ exists some degree of economic insecurity. One implication of this ld also be noted: the principle that each individual should have the op- unity to achieve economic security through his own efforts has mean- ɔnly in a liberal economic system. It has no significance in authoritarian omic systems.

The first and simplest kind of economic insecurity arises from personal ɔrtunes such as physical or mental incapacity to make a living. Illness ıs an important source of insecurity to both individuals and families, and ably has been the principal single cause of poverty in this country

Accidents which either temporarily or permanently incapacitate people for work have similar consequences.

A second and somewhat more complicated kind of insecurity arises from the bargaining weakness of some people. This is exemplified by the case of an individual laborer who is bargaining for employment with a large employer of labor. To such an employer it seldom matters very much whether he secures the services of this particular laborer or not. But to the workman, who may have little occupational or physical mobility, getting this particular job may make the difference between having an income and not having one. In such a case it is not possible to say whether the workman's insecurity is due to his own weakness or to his employer's strength. It is the fact that the bargaining power of the two is unequal that is important.

This bargaining weakness extends widely through our economy. Thus it is clear that some employers are insecure because their bargaining power is less than that of trade unions with which they deal. Inequality of bargaining power applies similarly to the weaker competitors in an industry. The financial strength of the giant concern and the strategic advantage it has in being able to undersell its weaker competitor is a source of persistent insecurity to small businessmen.

A third class of insecurities arises from particular economic changes. This is illustrated by "technological" unemployment. The workers who have spent much time and effort in becoming skilled at a particular occupation sometimes find themselves out of work because of some invention or some scientific or technological development. The loss of their jobs by glass blowers when semiautomatic—and later automatic—glass-blowing machines were invented is an example. Such a worker has little opportunity to do anything except become an unskilled laborer. Economic changes also can destroy the security of owners of businesses. Thus a change in style which discontinues the use of silk in women's clothing causes manufacturers and dealers in silk (and, of course, the producers of raw silk and the wage earners who work in the silk industry) to suffer great losses. The substitution of one kind of product for another in a more permanent sense (as, for example, the substitution of the automobile for horse-drawn vehicles) has similar consequences for the people who were engaged in the displaced industry.

The fourth and last type of insecurity to be presented here is the most complicated of all—insecurity that develops in the economic system at large. Such insecurity is characterized by, and is due to, a general state of unbalance. It is vividly illustrated by conditions which existed in our own coun-

y during the long depression of the thirties. This type of insecurity feed on itself, and its ramifications are almost endless. It affects not merely per nal and domestic affairs but also international economic and political rela ns. It is not possible to describe all aspects of it in this brief classificatior kinds of personal insecurity. It should be pointed out, however, that ch a condition of total unbalance may involve long-time maladjustments the economy which extend far beyond particular cyclical crises and pressions.

OBLEMS OF STABILITY

The economic insecurity that is due to general unbalance in the econ- y is dramatically illustrated by the frustration and want endured by the ple in most countries of Europe and Asia since the close of World War With many of these people, insecurity has become chronic; its physical l psychological results have made them progressively less able to pro- e for themselves. As was pointed out above, individual insecurity on such cale is due to a general state of unbalance—in the case of these foreign ntries, to a condition approaching complete breakdown—in the economic em. Although the destructive, disorganizing, and demoralizing effects of and revolution create such conditions on a very wide scale, insecurities to economic unbalance arise also in time of peace.

We in the United States are keenly conscious of the material costs of . Yet a competent estimate of our productive record during the forty- n-year period, 1899-1945, reveals that the cost of goods used up in wars ng this period was only slightly more than half as great as the value of luction that was lost through unemployment.[1] In other words, unem- ment through forty-seven years was more costly than the wastes of e wars.

What are the causes of the peacetime instability of which unemploy- t is a symptom? Are they due to our system of economic organization, e they associated with *any* form of organization in which there is elab- division of labor and complicated methods of exchange? Some light be thrown on these questions as we proceed with our study.

With the limited knowledge and imperfect controls that we have, there tably will be some degree of economic instability. There would be some if our knowledge were complete and our controls perfect. This is nec-

Frederick C. Mills, "Technological Gains and Their Uses," *Science*, February 28, p. 221.

essarily the case in a "progressive" economy—i.e., one in which new products and new methods are constantly being devised, and productive capacity per capita constantly being increased. The interaction of such trends causes some fluctuations of output, of income, and of economic activity; nevertheless, we often suffer disturbances much greater than seem to be made necessary by our progressive economy. This disproportion is due in part to the tendency of economic fluctuations to grow and to feed upon themselves, so that a relatively small disturbance grows into a relatively large one, and in part to causes other than the trends of growth described above.

Thoughtful consideration of the problem of economic stability raises important questions of human values and objectives. It seems probable that most people desire, for themselves, both economic adventure and security, and, for the community in general, both progress and stability. Each of these is an unimpeachable aim; but the attainment of all of them at once raises contradictions and difficulties.

PROBLEMS OF CONTROL

How does it come about that our economy produces as much as it does —no more and no less? Of the total amount produced, how is it decided that a given fraction of the total will consist of shoes, another fraction of wheat, another of houses, etc.? What causes our working population to be divided as it is among various occupations, so that there are so many farmers, so many coal miners, so many physicians, so many movie actors, etc.? And what determines the total number of workers to be employed, the hours that each will work, the wages or other compensation that each will receive? How is each price in the market determined in relation to each other price? What fixes the exact amount of investment that will be made this year, its precise distribution among particular business firms, and the rate of interest or of profit that each investment will yield? What determines the amount and variety of our imports and of our exports?

All of the foregoing questions refer to economic controls. It seems clear that every individual person who consumes and produces has some influence in deciding each question. If the only influence present in a particular situation is simply the aggregate of individuals acting as consumers and as producers, control is exerted by competition. If all, or most, of the producing, the employing, the buying, the selling, the investing, is done by a few large organizations, the control by competition is reduced in greater or less degree. If the government intervenes to affect the answer to any of the

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questions raised above, we say that the economy is to that extent controlled by the state. In a liberal society, such control by the state cannot well—or for long—be used for a purpose not approved by a majority of the people, or even for one that is ardently opposed by a strong minority.

All three forms of control—by individuals acting independently, by large organizations, and by the state—are involved in the questions raised above. With the passage of time, there are evidences that the degree of economic control exerted by independent individuals has declined. This has occurred along with the decline of self-sufficiency in individuals and family groups. There has, *pari passu*, been a decline in the validity and force of an important tradition—that of the independence of the individual, or "rugged individualism."

The economic welfare of the legendary American pioneers, moving westward to establish family homesteads and expecting to produce by farming and by handicraft most of the things that they used, was determined principally by their own energies and skills. It frequently has been argued that these pioneers founded and furthered the American habit of thought, which resents controls by large organizations and by the state, and which demands traditional economic liberty. Many of the same arguments conclude that this habit of thought was appropriate to a "horse-and-buggy age," but has little or no relation to the modern age of specialization in which such self-sufficiency is beyond the reach of individuals and family groups.

The difference in degree of self-sufficiency should, indeed, be given an important place in any consideration of economic policy. It should be borne in mind, however, that the legend of the American pioneer, like other legends, contains many elements of myth. The hardy pioneers did not hold their own destinies completely in their own hands; even they were subject to control in important respects. The policies of the federal government toward selling or giving away land; tariffs and excises levied against goods; the prices charged settlers for their land by "land companies" and "development companies" holding a high degree of monopoly power in large agricultural regions; the sometimes artificially restricted markets in which many settlers in new territories had to sell their surplus produce and to buy those things they could not make at home; the charges made for carrying freight by transportation companies—these were among the important controls that affected the material destinies of our early settlers. The farmers, who made up the main body of pioneers, recognized that some of their difficulties arose from these various controls. Strong agricultural "lobbies" and "pressure groups" emerged early and sought persistently—and with some success—to

secure governmental controls favorable to farmers, and the suppression of controls unfavorable to them.

Thus the problems centering about economic control are in no sense new. But today there are greater opportunities for control by powerful economic groups in their own interest, opportunities created by the decline of individual self-sufficiency. Furthermore, there is a corresponding increase in the conscious need for controls to be operated by the state "in the public interest." The growth of the public interest concept is significant, but inconclusive: when practical issues are discussed, the "public interest" often is strikingly similar to the interest of a particular economic group, i.e., to the self-interest of each person composing the group. Adam Smith and his followers probably would appreciate the irony of this.

Later chapters of this book will be concerned with controls of the economy by both private and public agencies. Various ways in which business enterprises (whether monopolies or not), trade unions, financial concerns, agricultural organizations, and consumer groups seek to control the markets in which they respectively operate, will be examined in detail. So, also, will the aims and methods of governmental controls as they are applied to numerous and diverse aspects of our economy.

POLICIES AND FALLACIES

One symptom of the complexities of knowledge and understanding which becomes especially acute at a time of economic crisis is a widespread belief in various simple, direct, often apparently obvious, although nearly always illusory, "corrective" measures. Such ideas are not peculiar to periods of economic crisis; in some form or other they are entertained and expressed by some people or by some groups of people at almost all times, regardless of the general prosperity that may prevail.

The make-work fallacy. This is a way of thinking about economic affairs into which everyone is in danger of falling at some time or other. It is the view that there is an advantage in giving work to people, without regard to the occasion for, or the results of, the work that is done. A snow storm is viewed as a good thing because it causes people to be given jobs clearing the streets; or methods of production in which more labor is employed in producing a given output are considered more desirable than those in which less labor is employed. The economic reasoning here is based on two assumptions: (1) that such uses of labor cause more people to be employed and wages to rise, and (2) that the greater employment and higher wages will enable wage earners to buy more goods and services than they other-

wise could, and so will cause greater productive activity and a still larger demand for labor.

It should be obvious that if a large proportion of the working population were regularly and constantly engaged in clearing the streets of snow, or in reconstructing buildings that had burned, or in filling jobs created by needless "slow-downs" and "doubling-up," there would be fewer people left to do the work which constitutes a net gain to the wealth and the income of the community. Even an extremist in these matters would not go so far as to argue that a benefit would be gained by having half of all the people dig ditches while the other half filled them up. It should be equally obvious that higher total wages, if accompanied by a smaller volume of production of desirable goods and services, would result in people being able to buy less rather than more of the things that they want.

The make-work idea has been the basis of some economic controls exerted by the state, and others imposed by labor organizations. It assumes that there always is a limited amount of productive work to be done and that there consequently is an inevitable tendency toward mass unemployment. In spite of the somewhat obvious arguments against it that were stated above, the make-work idea often retains a degree of plausibility because of the limited areas to which specific proposals apply. Yet, if all the ideas of this kind were given effect at once, the result would be that a substantial part of the working population would be engaged in work that yielded no net gain in the form of desirable goods and services.

The short-time, long-time fallacy. What we think, like what we see, is affected by perspective. In thinking about matters of policy, just as in looking at a landscape, we always are likely to see most clearly those things that are nearest us. In other words, more immediately desirable objectives tend to loom larger in our eyes than those that are more remote. To say that long-time objectives of policy are of more lasting importance than short-time objectives is, of course, a tautology. It should be almost equally obvious that action taken in any short period of time should be judged with regard to its long-time effects. Yet our eagerness to attain some immediately desirable conditions, or to escape some immediately undesirable ones, often is greater than our concern with whether conditions will be good or bad at some time in the future. Our absorption with the present appears to be a source of much fallacious thinking with regard to long-time policies.

Our tariff history is littered with examples of this kind of fallacious thinking. Two striking examples occurred in the period between the two World Wars. The Fordney-McCumber Tariff Act of 1922 imposed import duties on numerous articles that previously had been on the "free list," and

raised many existing duties to record-making high levels. The purpose of the act was, of course, to protect American producers against competition from "low-cost foreign producers." Certainly the volume of imports of dutiable articles was reduced; but other, unintended, effects also followed. Since foreigners were only able to sell smaller amounts of goods to Americans, they also were not able to buy, with cash received for their exports, the quantities of goods they wanted to get from the United States. Our exports remained high only by virtue of heavy loans made by Americans to foreign firms and foreign governments. Many of these loans have not been, and will not be, paid. Without our importing more, foreigners could not get the means to pay their debts owed in the United States; this contributed substantially to the general collapse of credit in 1929 and succeeding years. In 1930, after the onset of the Great Depression, Congress passed the Smoot-Hawley Tariff Act, which again raised import duties to new high levels. This action, aimed to give even greater protection to American producers in their dwindling domestic market, also had the effect of depressing still further the dwindling international market. It also had indirect, boomerang-like effects that were injurious to our economy. Many countries passed "retaliatory" tariff laws, aimed specifically at products of the United States. And in some foreign countries (e.g., Switzerland) there were numerous protest meetings at which the people present took oaths never again to buy anything produced in the United States.

Even without "shortsightedness," there are bound to be difficulties of perspective. The more remote in time the effects of a particular policy may be, the more difficult it is to judge the degree and extent of those effects and their relation, in that distant period, to the public interest. Yet, to the extent that such judgments are possible, they must of necessity be made. Even if the distant effects of a policy could be foreseen clearly, there would still be differences among people as to its desirability, simply because people differ in their opinions as to which objectives are more desirable and which less.

TWO TYPES OF ECONOMIC PROBLEMS

The problems with which we shall deal are concerned principally with stability and control in our economy. But these problems permeate all phases of economic life, and are not separable for special study. "Stability" and "control" are, indeed, abstractions which take on specific meaning only when applied to concrete situations or to other abstractions (for example,

the level of prices, competition, standards of living, the employment of productive resources) which relate to concrete situations. Illustrations of the forms of these problems are offered below. They are divided into two classes: (1) problems that are technical, and (2) problems that pertain to welfare.

Technical problems. Technical economic problems are concerned solely with the relations of causes and effects. They are illustrated by the following questions.

What will be the effects, on wages and employment in a given industry, of the introduction of certain labor-saving machinery? To what extent will the introduction of such machinery result in lower prices to consumers of the commodity produced by that industry? Will the profits or the solvency of various firms engaged in this industry be affected by the investments which they make in these new kinds of equipment, and by changes in the volume of production and in the price of the product? In case wage earners are displaced by the introduction of new machinery in this industry, will their experience and their specialized abilities aid them in securing other employment?

The above are narrowly specific questions; let us continue our illustrations by introducing some technical questions of a more general character: To what extent would a raising of living standards of the people with lowest incomes cause these people to become productively more efficient? What is the prospect that their gains in productive efficiency will become permanent, and will enable the people concerned to maintain—or even to improve—these higher standards of living over long periods of time? In order to secure and maintain the fullest possible employment of the nation's productive resources, is it necessary that the state assume an increasingly direct part in economic activity, and keep productive resources employed by long-range programs, as, for example, of public works? In what respects is competition conducive to optimum production of goods and services? Under what conditions does monopoly result in more economical production? In what ways does war affect employment, prices, and the distribution of income? To what extent do the forces of competition tend to be self-destructive, in the sense of actually causing monopoly to grow? What are the reasons for changes in the organization of markets for commodities, for labor, for capital and credit, for the goods and services ordinarily exchanged among nations? These technical questions are only a few of the many that could be raised; they are presented here merely as illustrations of problems of this type.

Problems of welfare. Economic problems pertaining to welfare involve considerations of what is good, what is just, what is desirable. They are illustrated by the following questions.

To what extent is the income of any individual or any class of people a measure of the material contribution which that individual or that class makes to the economic life of the community? If those who contribute little sometimes benefit more than those who contribute much, would not the ends of both efficiency and justice be served by a distribution of income in which each person would share on a basis more nearly commensurate with his contribution? Is it not desirable that a part of future increases of income to members of the community take the form of greater leisure, and consequent greater opportunity for enjoyment of life? Inasmuch as many people suffer material privation and want as a result of causes inherent in the economic system, and so beyond the control of the people principally affected, to what lengths ought the community to go in providing these people with material security? If we assume that it is desirable to provide the material basis for a comfortable life to those people who work competently and willingly, how far are we justified in modifying the system of economic liberty in order to achieve that end? To the same end, how far are we justified in placing limitations on the rights of property? Do some results of economic activity have values to the community (social values) entirely apart from the market values involved, and do some entail costs to the community (social costs) entirely apart from the market costs involved? If so, should we not act to maximize such social values and to minimize such social costs? To what extent should our economic life be dominated by individual action, and to what extent by collective action?

The different qualities of these two sets of questions must be immediately apparent. The first set refers solely to technical considerations; the matters with which the questions deal are as "objective" as the terms in which we might inquire about the activities of the solar system. The questions in the second set are concerned with human purpose; they involve "subjective" considerations of what is good, what is just, what is desirable.

Some workers in economics have argued that their field of work is solely a science, and that questions of what is good, or just, or desirable belong to the provinces of politics and moral philosophy. It is obvious that human purposes are not created or directed by scientific investigation; they are shaped by human traits, customs, habits. But, at least within limits, they are affected by rational considerations. And it is equally obvious that our interest in the problems treated by economic science derives from our more fundamental interest in the good, the just, the desirable. It is inevitable that

ve will not, at all points, agree among ourselves as to what things are ; ıst, and desirable. But democratic institutions and free markets prov ıeans by which each of us can, in some degree, act according to his eliefs and tastes. Technical economic analysis can help us to this end

Thus it appears that our interest in human purposes takes precec ver, and shapes, our interest in technical analysis. Yet it is only thr :chnical analysis that understanding of the facts and relationships of ɔmic life can be gained. It is important to recognize that both of t .terests are involved in the study of economics. Both of them are taken :count in this book.

OUR ECONOMIC RESOURCES

2 How we use resources: the market mechanism

3 Our human resources

4 Our natural resources

5 Our techniques of production

6 How we create and use capital

CTION TWO

OUR ECONOMIC RESOURCES

'RODUCTION

Let us imagine, for a moment, that the much spe[illegible] n Mars has completed his sojourn on the earth and [illegible] home. Let us imagine further that this distinguished [illegible] leliver an address before the Martian Society for the [illegible] lerstanding. The subject assigned him is, "How the People on the [illegible] nd Their Time." And now—even if it is presumptuous for us to [illegible] ure what an inhabitant of another planet will say about us—let us [illegible] t the theme of his address will be. He may, very likely, express [illegible] :h, translated into English, are about as follows: "The people on [illegible] ı spend their time in an infinite variety of ways. Beyond the fact that [illegible] nem do those things made necessary by the weaknesses of their bodies [illegible] as eating and sleeping and blinking their eyes, there are wide differ[illegible] s in the ways that different people spend their time. Yet in those parts [illegible] are called 'the civilized sections of the earth' there is one condition [illegible] h is fairly common. Most of the people of these sections employ the[illegible] in getting and spending little discs of metal and rectangular pieces [illegible] r which are called 'money.'"

Suppose the Martian scholar were able, in his address, to elaborate th[illegible] :al statement into an account of what this widespread custom of gettin[illegible] spending money means. For example, suppose he could show how [illegible] s to organize the activities and interests of people, and how it enable[illegible] le to differ so markedly in their other activities. If he could do this, h[illegible] d supply his auditors with a rather accurate description of how the[illegible] e on the earth spend their time. More precisely, he would give a very [illegible] ccount of how people make a living in the Western and Westernized

parts of the earth today. Still more precisely, he would describe and explain our economic resources and the market through which they are organized and used.

Economic, or productive, resources consist of human abilities and material things which are useful to people in creating goods or rendering services. Anything which is not useful, or not likely to become useful at some time in the future or under some more or less foreseeable conditions, is not such a resource. The skill possessed by a great chemist can be regarded as an economic resource because it promises to be useful to mankind, but the skill formerly possessed by a chemist who is no longer living can by no stretch of the imagination be regarded as a resource; the discoveries he made before his death may be resources, but not the chemist himself or his former skill. The skill of a chemist who tests drugs for "dope" smugglers can be regarded as a resource by the smugglers because it is useful to them, although the community at large may agree that the purpose to which this skill is put causes the skill itself to be worse than useless. Again, if, as Francis Bacon put it, "the breed and disposition of the people be stout and warlike," these qualities are productive resources from the point of view of a group which desires to increase the military and political power of the state, as was generally the case in sixteenth- and seventeenth-century Europe and was recently the case in Germany, Italy, and Japan. But these qualities might not be resources in a state in which peace and the arts of peace are more highly esteemed.

More precisely stated, an attribute of man or a part of man's environment can be regarded as a productive resource only in relation to its ability to satisfy some assumed set of man's wants or desires. When we think o American resources before 1492, we think of them as resources, even though they could not have been so regarded from the viewpoint of pre Columbian Europeans since their existence (and, in many cases, their use fulness) was then unknown. We may speak of American "potential re sources" in 1492, but in so doing we are assuming a particular set of cond tions: present wants, existing knowledge, and modern technical methods c development and use. It is these conditions which make our lands, forest rivers, mines, and quarries productive resources now. These "natural" re sources are organized through our elaborate marketing system; they are e ploited and used by another resource, the energy and skill of our peopl this has resulted in the supply of goods that we have, including yet anoth resource, capital goods.

The quantity or the value of a resource is relative both to our need f [illegible] when it is estimated that t

ıited States reduced its coal reserves by more than sixteen billion net
:ween 1807 and 1924, it might appear that coal as a productive reso
; been materially reduced. In terms of tons, a consumption of sixteen
ı is impressive, but in terms of the ability of our remaining coal st
satisfy our needs, it has little meaning. Such great improvements in
hniques of utilizing coal as a source of energy have taken place rece
t the need-satisfying ability of our remaining coal reserves has been gre
reased. To put the case differently, conditions have so altered that
:ential "productivity" of our coal stocks—that is, the amount of ne
sfying service that existing resources will render—is not less, but grea
n ever before. Under the old conditions of coal utilization the amount
; productive resource has diminished; under existing conditions, it
reased. If present conditions remain unchanged in the future, it will
ase; if techniques improve over considerable periods, it may increase
rease depending on the volume of use and the rate of technical i
vement.

It is the purpose of this section to describe in detail the productive
rces of the United States and to analyze the conditions of their use.
dingly, we need to examine: (1) the uses people make of product
ɔurces, with special attention to the way in which the resources
cated, through the market, among the various uses to which they are p
the kinds and amounts of productive resources in the United States, a
conditions affecting their several quantities and qualities; (3) the exte
which we actually utilize our productive resources, in so far as
ted knowledge of this difficult subject permits us to say anything abo
Our study will reveal many factors that are important from the point
v of both economic stability and economic control. Some of the
ategic" factors are studied in greater detail in later sections of this boo

CHAPTER TWO

How we use resources: the market mechanism

WANTS AND THE MARKET

"Production" includes all activities that are necessary to give commodities and services the forms that people want, and to have them available where people want them and when people want them. Therefore, productive resources have meaning only in relation to the satisfaction of some assumed set of man's wants. It is necessary then to consider wants in some detail in order to determine how they are related to the processes by which productive resources are utilized.

In the first place, there is a conflict among the wants of a single individual and this same conflict extends throughout society as a whole. Each individual has certain desires which he wishes to satisfy (they may, of course, change over periods of time) and certain means by which he may satisfy some of them; but the fact that these means of satisfaction are limited in amount implies that the satisfaction of one want involves, in general, an inability to satisfy other wants. The unskilled laborer, living on a slender income, must sacrifice alternative purchases if he wishes to buy a jalopy or a new suit of clothes; a millionaire must give up income from a portion of his securities if he is to enjoy the pleasures of owning a yacht.

Similarly, each nation must determine in some manner to what extent the resources available to it—labor and skill, energy from coal and water, wood, steel, cement, existing buildings and machines—shall be used for each common national end. Sometimes, in the case of both the individual and the nation, the desired end may be accomplished in whole or in part by working harder or by expanding output; but sometimes a choice must be made, for instance, between "guns and butter." This was strikingly illu

ıted during World War II through the rationing of many commod
ed by consumers. At the same time the system of "allocations" and "pr
s" insured that scarce materials, equipment and manpower were used
rposes deemed by the government most essential to the prosecutioı
: war.

In the second place, there exists a conflict between the sets of want
ferent individuals or groups of individuals. Without going into the
ılt problem of whether or not a society might be arranged so as
ninate these conflicts, it is sufficient to note that existing wants,
sting limitations on the supply of resources available for their satis
ı, imply that the desires of some must go unsatisfied in order that
nts of others may be met. As long as the supply of automobiles is
imited, the labor, capital equipment, and material used to provide ther
available for the production of cheaper refrigerators or better bı
riages. As long as voters desire more post offices, larger hospitals,
ger navies, the resources necessary to the production of these things
available for the production of better houses, larger loaves of bre
more luxurious liners.

In any society, whether it be fascist, communist, or democratic, prii
: or advanced, a method of some sort is necessary to resolve these cc
:s of desires. An apparatus must be set up to determine *whose* wants v
satisfied, *which* wants will be given preference, and to *what extent* o
of wants will be sacrificed to another—that is to say, how producti
ıurces will be organized and distributed between different uses leadi
ctly or indirectly to the satisfying of human desires. In a dictatorsh
machinery of the state may be used to decide not only these questio
even what the wants themselves shall be. Indeed, some writers belie
the control of wants is a condition necessary to the tolerably efficie
'ation of any economic system in which the uses of productive resourc
determined by the decisions of state officials.[1]

In liberal economies, as they have developed since the eighteenth ce
, the resolution of most of these conflicts has been left in large part
nechanism of the market-price system. Where this is done, each ind
al remains free to choose between the various alternative satisfactioı
to him, given his own resources (financial or other) and the limitatior
ısed by the operation of the market mechanism itself. In concrete term
confronted with a multitude of goods—articles of clothing, kinds o

[1] See Walter Lippmann, *The Good Society*, Little, Brown, 1937, p. 97 ff.

food, houses, machines, etc.—and services such as those of actors, physicians, lawyers, and plumbers, any of which he may have if he is able and willing to pay for them.

In order that he may be willing to pay for them, he must make a choice among the various alternatives open to him. With given financial resources and given preferences, his choice will depend in part upon the price he must pay to get what he wants. If the price of beef is rising, he may purchase less beef and more pork, or he may reduce his expenditures on baseball games. Whatever he does, he chooses among his conflicting desires for different goods and services by considering what he must give up in order to obtain what he prefers. In this way, the problem of *what* desires each individual will satisfy is settled.

The prices of the things an individual desires are market prices which depend partly upon the amounts he and others are able and willing to spend, and partly upon the amounts necessary to induce still other persons to supply the things he wants from the resources they possess. If others desire increased shares of a particular commodity he seeks, he will be faced by rising prices which serve to reduce both his willingness and his ability to obtain what he previously wanted; the satisfaction of his wants is thereby limited in order that the wants of others shall not go unfilled. Similarly, his spending contributes its small share to the forces limiting the wants of his fellows through its effect on the market price of each commodity he buys. A sort of balance is struck by which the shares of all individuals are determined in much the same sense as that in which two weights on a beam supported in the middle may be said to determine one another's position above the ground. Partly in this manner, the market-price mechanism settles the problem of *whose* desires shall be satisfied.

THE UTILIZATION OF RESOURCES

There are still other ways in which the market-price system operates so as to accomplish this result. In the preceding discussion the problem was considered from the point of view of the individual seeking satisfactions from the direct use of available goods and services; almost nothing was said about what determines the volume of goods and services available and about the ways in which productive resources are related to the problem. The following considerations show that this aspect of the question is not fundamentally different from the one already discussed.

He who possesses a productive resource—whether it be a farm, a ma-

[illegible] chooses among the alternative satisfaction

lable to him directly or indirectly through its use. He may use it h
or leave it idle; he may sell its services or he may use it to prod
ething which he expects to sell in the market in order to obtain go
lesires with the proceeds. Whichever alternative he chooses, his cho
depend on his wants and the wants of others operating through pri
If a rise in price—attributable to an increased desire of people for a pr
to which his resource is capable of contributing—makes one alternat
e attractive than another, he will be persuaded to choose this more
ble alternative. If, previously, he has been using the resource he p
s to produce some other object, he will transfer his resource (i.e.,
r, his capital, his land, his business abilities) to the production of t
object, provided the increased price is sufficient to induce him to und
the change. That is, he will make the transfer if he is persuaded that
benefit on balance. Thus the market-price system operates to bri
ıt a reallocation of available resources among their various possible us
manner which leads to an increased supply of those goods and servic
which the desires of the public have increased.

There is yet another way in which resources are influenced by t
ket-price system. If an increase in the demand for a particular good
ce, operating through a rise in its market price, leads to an increase
demand for a particular resource used in its production—expresse
ıgh a rise in *its* market price—there will be, in general, an increase
ıvailable supply of this resource. Under the conditions previously pr
ıg there will have been some resources of this type which were merel
ıtial resources in the sense in which this term is used in the introductio
is section. The benefits to be obtained from the use of these resourc
r the former conditions would not have been worth the effort an
ıse attendant upon their use. Under the new conditions of increase
nd and higher return, the utilization of certain of these resources wi
appear profitable to their possessors, and they will be used. The tot
ıble supply of the resource, the demand for which has been directl
ıdirectly increased, will expand. The greatly increased demand fo
in war industries during 1943-45 encouraged husbands to work over
and wives to leave their kitchens. This brings us back to what wa
n the introduction concerning the relation between what is meant by
oductive resource" and the idea of "usefulness"; an increased desir
e part of the public is generally sufficient, once it takes a money form
nvert some potential resources which were valueless into productive
rces which are useful and, consequently, valuable.

Copper presents an interesting example. This metal has been mined since very early times and it is probable that ancient mines were of great richness. During the nineteenth century almost no ore containing less than 6 to 8 per cent of copper was mined. The great increase in the demand for copper which accompanied the development and expansion of the electrical industries, and great advances in the techniques of copper mining and refining, have now made it profitable to utilize ores containing in some cases less than 1 per cent of the metal. Lean ores which were formerly useless have become valuable; our available copper-producing resources have expanded in response to an increased demand for copper.

Finally, the market-price mechanism operates so as to adjust the relative proportions which different resources bear to one another in productive processes. The manager of a business enterprise will not find it to his interest to use high-priced skilled labor in all the operations necessary to making commodities or services that he produces. He will find it more profitable to substitute less expensive skills in certain processes, though in others he may find that lower-priced labor actually is more costly because of lower quality of the work done. In general, he will adjust the proportion of skilled to unskilled labor, in the production of a given commodity or service, so as to minimize his costs or maximize his net return. According to the prices that must be paid for them, and the values that they yield to production, skilled and unskilled labor services will be used in those places in which they are most "useful";[1] unskilled labor will be "skilled-labor saving" in the sense that the use of unskilled instead of skilled labor services reduces costs and releases the services of skilled labor for other tasks. To a considerable extent machinery can be similarly substituted for particular labor skills and vice versa. Agricultural output may be altered by using more land, or more labor, or more machinery, when the amounts of the other two factors remain fixed in each case. In short, various resources are to a considerable extent substitutive, and the market-price mechanism usually, though by no means always, tends to operate so as to adjust their proportions in a manner which enables a given output to be produced with minimum effort and expense.

[1] This should not be taken to imply that prices always measure "usefulness." It should be clear from the preceding discussion that the idea of "usefulness" itself depends on value judgments, that is, on the desires of human beings, and it does not follow that the conditions brought about by the market-price mechanism will necessarily be the most desirable. Governmental intervention, such as control over the employment of women and children and the establishment of minimum wages, is usually—though not always—the result of the public's dissatisfaction with particular results of the p

MAJOR CLASSES OF RESOURCES

A detailed treatment of each of the major categories of resources ı deferred to the chapters which follow, but it is convenient at this pc consider briefly what these categories are.

Labor. The first resource is population. Population is classed as a rce because obviously man uses his own abilities to accomplish what res. He utilizes his own energies both physical and mental; he discov ıurces which are useful to him; he invents new and better methods ıg not only the resources he discovers but also the powers he hims sesses. Perhaps most important of all, he provides the direction and ı ization of productive activity without which all effort would be ı ductive and meaningless. Man's labor, regarded as a productive resour ıerefore conditioned by his numbers, his physical strength, health, sta intelligence, initiative, energy, organizing ability, technical skill, ec on, self-reliance, adaptability to both physical and social environme ipline, co-operation—by his capacities, his virtues, and his vices.

Land. The second resource is "land." Before the industrial revoluti the tremendous expansion of the manufacturing industries, it was nat to emphasize man's dependence upon land as the source of his fo ɔly and minerals. Gradually the term has been extended to include thr inct ideas: (1) land as a source of materials (agricultural products, tir minerals, etc.) useful to man; (2) land as a source of energy, indirect ı the cases of coal, petroleum, and natural gas, and directly, as in tl of water power; and (3) land as a site or location associated with us qualities of soil, climate, position relative to markets, or other adva s. In general, all economic objects included in the term land—soils, fo rivers, building sites, mineral deposits, and the like—have in comm ssential characteristic which the other categories of resources do n , a characteristic which exerts a profound influence upon human a . They are spatially immobile and their immobility imposes unavoi conditions upon man when he desires to use them for his purposes. Tl st part of the effort and expense—especially in a country as large an arsely populated as the United States—which people devote to the cor tion, maintenance, and operation of intricate systems of transport mu tributed to this characteristic.

Capital. The third productive resource is "capital." By this term ıt all buildings, factories, machines, tools, transportation and communi n equipment, stocks of finished and unfinished goods: all of those ma

terial things which, in the course of time, have been accumulated or saved and are used for further production. This use of the term capital should not be confused with its money value, that is, the value of capital expressed in money terms. It is necessary to keep this distinction clearly in mind, even though the impracticability of enumerating every item of capital equipment (and certain other difficulties) require us to make estimates of the volume of capital, and changes in volume over periods, in terms of money.

These three major categories, labor, land, and capital, are those in which resources are customarily classified, partly because historically they were accepted by earlier writers and thus became traditional, and partly because they are reasonably well adapted to the purposes of economic analysis. As categories, they have minor imperfections which should be borne in mind. For example, it is not always easy to draw the line between capital and land. How, for instance, should we classify a tunnel or an irrigation canal? Both have been built by man, just as machines are built, because they contribute to welfare, but once constructed they are a part of man's environment as fixed and unchangeable as any hill or rock. They appear to be both land and capital. Similarly, is the skill which an accountant acquires by much effort, training, and expense to be regarded as his capital or simply as a type of labor skill?

The answer lies in the fact that the definitions of the three major classifications are not mutually exclusive. In this sense they are defective, but the defect is not a very serious one for our purposes here. It can usually be overcome by a consideration of the particular problem in which the categories labor, land, and capital are involved. If the efforts and expenses necessary to build canals or to train accountants are under consideration, we may regard their results as capital; but if the skill of existing accountants or the available supply of canals, in relation to the services they are capable of rendering, are under consideration, then we may classify the first as a labor resource and the second as a land resource. In neither case is there any great difficulty; but a recognition of the defect in the definitions and the manner in which it may be overcome is needed in order to avoid confusion and quibbling.

KNOWLEDGE AND INDUSTRIAL TECHNIQUES

Just as there is available at a given time a more or less fixed stock of resources in the form of labor, capital, and land, so is there a more or less fixed fund of knowledge. Like capital, it is maintained by each generation from time to time in a form which is always changing

nstantly is being amplified, extended, and improved, and its developr anges not only the means and methods by which people fulfill their es but even what they consider desirable. As new methods and de: olace old ones, some sections of knowledge are lost or forgotten or l the verge of extinction;[1] a change in desires or methods may lea :ir revival. At any given time some sections of knowledge are immedia :ful to man and constitute productive resources, while other sections y potentially useful.

Like other useful possessions of man, knowledge requires both ef l expense for its maintenance and increase, as the reader has no do covered for himself. It is very unevenly distributed among races, is, and individuals—perhaps more unevenly distributed than wealth ome. Because the value of knowledge has come to be more highly ciated, an increasing proportion of man's resources has been devo its extension and improvement. Knowledge has been applied to the 'ery of knowledge; in Walter Lippmann's phrase, man has invented of inventing. He has applied his knowledge of mass-production meth h to the development of knowledge and to its diffusion, through ıblishment of great research organizations, newspapers, and educatio itutions.

Technological knowledge, that is, knowledge of industrial techniques a :hods, is obviously of the utmost importance to man's welfare. In the l lysis man's knowledge of the methods by which he may adapt his e nment to his own ends is the determining factor of his material we ıg. From the simple process of locating and exploiting a berry patch co-ordination of the millions of activities required to convert irc l, nickel, copper, lead, sand, wood, rubber, and a thousand other thin :luding even such strange substances as spiders' webs) into a mode ory with highly technical "precision" equipment, man is dependent n r upon his knowledge of things but upon his knowledge of the vario s in which things may best be used. Methods themselves are tools.

Technological changes, attributable to changes in knowledge of bo gs and methods, have revolutionary effects on resources and their us discovery of substitutes for silk has greatly reduced the importance silkworm in the Japanese economy. The rise of steam power change y coal deposits from geological curiosities into major sources of pr ive energy and of income. The development of cheap transportatio brought about tremendous changes in land utilization and the distribu

[1] Such appears to be the case at present, for example, with hand processes for mal window glass and glass tubing.

on of industries and populations relative to fixed resources. It is almost impossible to overestimate the economic and social importance of such inven-ons as the Bessemer and other processes for making cheap steel; they have ıade possible the great expansion of manufacturing industries in the last hree generations, the production and general use of the automobile, the ıse of power machinery in agriculture, the building of fleets and skyscrapers, nd the might of the greatest armies in history.

Each important invention is accompanied by and leads to a host of ımall improvements, all interacting and contributing together to techno-ogical, economic, and social change. Machines are constantly rendered ob-ɔolete by new discoveries and inventions; labor skills are continually being replaced by machine processes and new skills. Despite the fact that particular economic groups are injured by these changes and vigorously protest in so far as they are adversely affected, the recent rapid rate of technical change and its benefits are generally taken very much for granted.

FURTHER CONSIDERATION OF HOW THE MARKET ORGANIZES PRODUCTION

The first part of this chapter described the general way in which the desires of people are related to productive resources. Attention was then turned to the ways in which the market mechanism operates to determine *what* desires are to be satisfied, and *how* productive resources will be used to satisfy different desires, under conditions imposed by the market mechanism itself. Next, productive resources were classified, and special attention was given to the qualities and uses of the several classes. In all that has gone before, a constant theme has been that productive resources perform their numerous and varied functions in, and through, the market. Our next step will be to see, in a fairly systematic way, how this occurs.

In Chapter 1, the market was defined as an aggregate of related transactions. A transaction in which a Mr. Smith bought an automobile was given as an illustration of the co-operation of specialists through the market. It showed how the market organizes production. In order to envisage the part that the market-price system plays in our economic life, it is necessary that we conceive of this same kind of process as going on constantly in the production of all kinds of commodities and services. For this purpose, it will be convenient if we apply to all these commodities and services the collective name, "goods."

Let us now suppose that we have made a diagram of total production [illegible] through the market. It would look somewhat like an

rate pipe-line system with a great many sources, a vast number o
ons of one pipe with another, and numerous terminals. It would b
nient if an adequate diagram of total production were presented here
tter still, if there were at hand a three-dimensional model, made tc
Actually, however, such a diagram or a model could not be made tc
all the intricacies of the total process of production as it operates
h the market. A creative use of the imagination will, therefore, give
r comprehension of the process than would result from a demon-
ı with inadequate visual devices.

the many points where the flows of goods through this complicated
begin, original sources of materials, of equipment, of power, and of
energy—i.e., productive resources—feed their various contributions
luction into their respective pipes. From these beginnings all of these
nove more or less continuously, through various phases of process-
handling, until they finally emerge at the many terminals of the
in the forms of various goods suitable for use by consumers. At a
any points in this flow of goods from original sources to the hands
ımers, transactions occur. The goods in process pass from the pos-
of those people and firms that had processed them up to that point
possession of other people and firms that continue their processing
r movement, until they finally come into the possession of con-
In each transaction the goods change hands in return for prices that

interconnections, or interstices, among the various branches and
such an elaborate pipe-line system seem infinitely numerous. The
resenting those productive agencies that render services to various
ds of producers are especially numerous. Railroad companies, for
have a great number of connections because they transport a vast
f materials, of commodities, and of people "traveling on business."
ad companies are paid some price for each of the services that they
ı similar fashion, banking concerns have many such connections
ney provide financial services to a great variety of industrial and
al firms that are their customers. The banking firms also charge
the services that they render. Thus all of what we may call the
l adjustments" that propel this elaborate flow of goods from
ns to the hands of consumers are made through the payment of
ces.

start now at the other end of our pipe-line diagram of the pro-
ocess, and proceed from consumers backward to sources of ma-
pment, power, and human labor, we find a flow of

nts moving in the direction opposite to the flow of goods. That is, we d it moving backward from consumers toward the original sources that ve been described. This movement takes place through the payment of ices at the various interstices at which transactions occur. Without the oney payments flowing in sufficient amounts throughout the productive stem, some parts of the system would not be efficiently articulated with her parts—that is to say, the flow of commodities, materials, and services ould be hindered to the extent that these money payments failed to be ade.

On the other hand, it would be possible for the flow of money pay- ents to be increased beyond the capacity of the productive system to spond. If this were to occur, the pipes affected by the increased flow of oney payments would fill to their capacities with goods. Since goods al- eady would be flowing in as great volume as they could, added volumes of oney payments would have the effect of causing prices to rise instead of using production to increase. This describes, but does not explain, the ondition known as inflation.

Either of the conditions described here—an insufficiency in the flow of money payments, or an overabundance in the flow—would lead to sys- ematic effects that, in one view or another, would be undesirable. From ne point of view, the undesirable effect of an insufficiency in the flow of money payments would consist in a failure to provide the community with an optimum flow of goods; from another point of view, it would consist in a failure to secure an optimum use of the community's productive resources. These are two ways of looking at, and of describing, the same situation.

With regard to an excessive flow of money payments, the undesirable effects would consist in disturbances to the structure of prices which, at some later time, might result in important restrictions to production and in material detriment to many people. In order for our pipe-line diagram to exhibit a consistent optimum flow of goods, it would be necessary for the flow of money payments to be exactly *appropriate*, both in total amount and in the proportions in which it would be divided among the various interconnected pipes. Exact appropriateness, either in total amount or in proportions, is not practically attainable; some of the reasons it is not will appear in later sections of this book.

AMERICA'S SHARE OF WORLD RESOURCES

Before resuming our discussion of the manner in which resources are [illegible] briefly the resources of the United

elation to those of the rest of the world. A detailed discussion eferred to succeeding chapters, but some general consideration ably be raised at this point. It should constantly be borne in mind imates of resources are surrounded by great uncertainty, not only eds and technical methods are constantly changing, but also be- little actually is known about the physical characteristics, amount, n of the world's natural resources. Estimates of the most compe- ts vary widely and are often little better than intelligent guesses. efore World War II, the world's human population was estimated igue of Nations at 2,125,000,000, of which about 828,000,000, or t, were concentrated in the great monsoon agricultural regions of lia, and Burma alone. The second largest concentration, in the l and industrial regions of Europe (including European Russia), about 25 per cent of the total. The United States possessed about or approximately 6 per cent of the total. Its greatest density of occurs in the industrial and mixed industrial and agricultural ded in the New England, Middle Atlantic, and East North Cen-

the population of the Old World is heavily concentrated in those Europe which contain coal and iron, so the population of the tes is most dense in those localities which are relatively near to sources of these basic industrial raw materials. It would be er- conclude, however, that concentrations of population are deter- ly by geographical conditions; the location of natural resources influence upon population distribution but so also have historical iffering reproduction rates, subjective considerations such as love nd many other factors. These in turn influence the selection of or exploitation.

Jnited States, with 6 per cent of the world's population, pos- t 14 per cent of the world's total land area (excluding polar re- between 970,000,000 and 980,000,000 acres of arable land, or er cent of the world's estimated total. We are particularly fortu- nly in a high ratio of arable land area to population, but also in ter of the soil and climate. American farmers raise all the major pt certain tropical products such as tea, coffee, and rubber. Be- chnological improvements in agriculture and current trends in on rates, it seems very unlikely that the American population will and so as to make its food supply inadequate; but even if such a hould appear in the distant future, it would still be possible to a considerable extent by curtailing the production of some

·ops and substituting others. For example, only a very small portion of the ·able land suitable for raising wheat, the world's most productive food ·op, is used for this purpose. But nearly the whole of America's arable nd, as compared to only one-fourth for the entire globe, is suitable for ·heat raising.

Any precise quantitative statement concerning America's share of world ıineral resources is out of the question. World resources of iron ore have een variously placed at amounts between 92,000,000,000 and 440,000,000,-oo tons, iron content being uncertain; the world's reserves of *commercially xploitable* iron ore have been calculated at figures varying from 10,000,-oo,000 to nearly 66,000,000,000 tons. Except for a recent Russian claim vhich appears to be extravagant, authorities in this field seem to agree, how-ver, that the iron resources of the United States are greater than those of ny other country. Similar, but not completely identical, conclusions may ›e stated concerning coal, copper, petroleum—all, with iron, of first impor-ance in an advanced industrial civilization—and most of the twenty-five or hirty other minerals which are important for special industrial purposes. Nickel, tin, and manganese are notable exceptions. The United States pos-ıesses almost no nickel or tin; nickel is imported from Canada, tin from the Malay Peninsula and from Bolivia. American manganese supplies, indis-›ensable to most steel manufacture, are so limited that the United States is dependent upon imports from Russia, the African Gold Coast, Brazil, and Cuba, with India as a possible alternative source. In general, it may be said that the United States is much more favorably situated with respect to min-eral resources than most other nations, but that it depends upon the outside world for a few strategic minerals of great industrial and military im-portance.

The accumulation of large quantities of capital and the development of an intricate and highly productive technology are not possible in every region. Limitations of climate, soil fertility, natural resources, and location relative to markets may make the struggle for existence too difficult to leave a sufficient surplus of time and human energy for other purposes. Under such conditions the arts are primitive and living standards remain low.[1] In this respect, also, America's situation has been unusually favorable in that the discovery and development of its wealth of resources came at a time of in-

[1] "Such an instance of 'arrested development' is afforded by the Eskimo, who have to all appearance reached the bounds of technological mastery possible in the material circumstances in which they have been placed."—Thorstein Veblen, *The Instinct of Workmanship*, Huebsch, New York, 1918, p. 148.

ferment conducive to great technical achievement. American
of living are probably in no small measure attributable to a unique
ion of circumstances which enabled its peoples to achieve and
evels of living not elsewhere possible. An opportunity existed, not
aise living standards and to keep them at a high level, but at the
to utilize currently a considerable portion of the supply of exist-
ces for an unprecedented expansion of the nation's stock of capital.

ATION OF INDUSTRY

tries may be said to be land-oriented, labor-oriented, or market-
vhen their location is determined *primarily* by sources of raw
or of power, by supplies of labor, or by markets respectively. An
ill tend to be located with reference to materials, labor, or markets
: total final cost of its product, due to processing and transport,
inimized. The mineral industries are, of course, land-oriented.
cultural activities are land-oriented, while others are market-
Cotton can be produced economically in the Gulf states, partly
favorable soil and climate, and partly because the costs of trans-
ınd deterioration in transit are a very small proportion of the
f cotton textiles and other products. The production of cheese
is concentrated in Minnesota, Iowa, and Wisconsin, far from the
the East but near the sources of feed crops, because these com-
n be shipped at relatively low cost and without great risk of
ilk-producing and truck gardening, on the other hand, are
nted because their products are bulky, perishable, and conse-
ensive to ship; each large city tends to be surrounded by its own
ıd system of truck farms.

omen's garment industry centers in the East and especially in
(although California is growing rapidly as a producer of some
men's wear) because success in this industry depends to a con-
ent upon an ability to meet promptly changes in market con-
ght about by the whims of fashion. The greater stability of men's
ts a greater decentralization of the production of men's cloth-
arly part of the nineteenth century, the need for cheap water
suitable climate made cotton textiles land-oriented, and caused
ome heavily concentrated in New England. The development
ng textile workers in the Northeastern states led the cotton-
-weaving industries to remain in these areas even after techni-

al changes had reduced their dependence upon water power, and had increased the relative importance of labor supplies. But recent technological hanges in textile manufacture have reduced the need for skilled workers, specially in the production of lower-grade cotton goods. This has been followed by an extensive migration of cotton manufacturing to the southern Piedmont—especially to North and South Carolina—in search of cheap abor. The industry continues to be labor-oriented, but the criterion has become the cheapness of labor rather than its skill.

An industry may be land-oriented with respect to more than one raw material. Such an industry will tend to be concentrated at the location where the total costs of bringing its raw materials together, and of distributing the final product in its markets, will be lowest. It is cheaper to bring the iron ores of Minnesota to the coal fields of Pennsylvania for the manufacture of iron and steel than it would be to transport both the coal and the iron to some intermediate point, or to transport coal to Minnesota. On the other hand, finished products using steel as a raw material tend to be market-oriented, since there is little or no reduction in total transport costs to be obtained from locating near the steel mills of Pennsylvania. The manufacture of agricultural machinery tends to be decentralized in the agricultural areas of the United States, partly because the total weight of the bulky finished product of this industry is approximately equal to the weight of the steel which goes into it. Bulkiness increases transport costs; it is therefore less expensive to ship the steel used to manufacture agricultural machinery to distant points than it would be to ship the finished product.

The importance of transport costs to the location of industries implies that location depends not only on geographical characteristics but also upon the peculiarities of the freight-rate structure. It is not possible to treat freight rates in any detail within the limits of this discussion, but one or two examples may serve to illustrate the problem. A policy establishing nearly equal freight rates from New England and New York to points west enables New England industries to compete with the New York industrial area in sections from which they might otherwise be excluded; such a rate policy reduces any tendency for New England industries to emigrate to other districts. Again, where lower rates per mile are charged on long hauls relative to short hauls, the granting of so-called in-transit privileges, in which the sum of the rates to and from an intermediate point is made equal to the total long-haul rate between origin and destination, may affect the location of processing industries. The granting of a privilege of this sort, "milling in-transit" as it is called, permits the continued existence of flour-

establishments at points between the wheat-raising areas and the for flour. Otherwise such establishments would be unable to com- n mills located at consuming centers or in agricultural areas.

ENT TO WHICH RESOURCES ARE USED

ng World War II and the period of extreme economic activity ely following it, productive resources were employed on a greater n ever before in our history. In terms of man power alone, the nore than sixty million people engaged in civilian occupations dur- and 1948, is the largest number so employed in the history of this In view of the unprecedented volume of employment, the use in ds of production of second-rate physical resources, the strains im- many of our service facilities such as those of transportation and cation—in view of all these symptoms, the immediate postwar ty, in the light of history, appear to be one in which productive were "overemployed." Some of the circumstances giving rise to on are treated in other parts of this book. For our immediate pur- vever, the important fact is that the degree of resource utilization stwar period is far from typical. There is strong evidence that, t our history (and even in times of prosperity), productive re- ve commonly been less than fully utilized. To test the extent to ductive resources are used, therefore, it is necessary that we draw more nearly typical experience of a period preceding World

been shown in this chapter that the utilization of resources is af- the widely ramifying market, by the prevailing technology, and s and social institutions. An examination of the extent to which ire used must proceed, therefore, from some fairly complicated ably oversimplified) assumptions concerning these related con-

rookings Institution, in one of the few available studies[1] of the esource utilization, attempted to avoid these difficulties by mak- es for each major industry on the basis of existing techniques ing customs of work; these estimates were then scaled down to ctually existing seasonal variations, unavoidable interruptions such

[1] G. Nourse and associates, *America's Capacity to Produce*, The Brookings Washington, 1934. For an excellent discussion of the difficulties involved measures and a critical evaluation of this book, see Arthur F. Burns, "The quiry . . . ," *Quarterly Journal of Economics*, Vol. 50, 1935-36, pp. 476-01.

as breakdowns, strikes, lockouts, etc., and idle—presumably obsolescent—plants. An attempt was made to establish a measure of "practical capacity" in accordance with these principles, to obtain statistical measures of practical capacity for each industry, and to compare actual output with practical capacity for the period 1925-29 and separately for the latter year.

The Brookings study concluded that the mining and manufacturing industries operated at 83 per cent of practical capacity in 1929, and at average levels of 83 and 80 per cent respectively in the period 1925-29. Railroad rolling stock and tractive power were utilized at approximately 70 per cent of capacity. In passing it should be noted that unused railroad transport capacity may have been increased by the great current development in competitive automotive transportation which took place about this time; if so, excess transport capacity can be attributed in part to the difficulty of making adjustments to new methods and new desires rather than to any inherent flaw in the operation of the market mechanism. The Brookings Institution wisely attempted to avoid intricate questions of this sort by its definition of practical capacity. But the dependence of the concepts of "resource" and "capacity" upon "usefulness," and hence upon desires and upon the price structure itself, makes it difficult, if not impossible, to avoid these considerations.

Similar conclusions were reached concerning agriculture, the chemical industries, lumbering, and a number of other fields of production. Allowing for temporary shortages, occasional stoppages, and accidental breakdowns, the authors concluded that 1929 output could have been increased by slightly less than 20 per cent of actual output. Finally, available supplies of labor were examined in order to determine whether or not there was sufficient man power to operate existing plants at the level of output believed possible. The conclusion was reached that labor supplies would have been adequate, but that many shifts between individual industries would have been necessary and more than a million workers would have had to be transferred between major industrial groups.

No attempt was made to study the effect of shifts in demand to be expected with increased income, such as an enhanced desire for better housing, higher-quality foods, and luxury goods. Nor was any estimate made of the reduction in output that would almost certainly accompany the transfer of workers—especially of large numbers of highly skilled technical experts—from the organization and continuous supervision of output actually produced to the task of making the adjustments necessary to increase output. The first of these difficulties was briefly considered in the

but it is doubtful whether either can be adequately dealt with in
ent state of knowledge. These limitations constitute no reflection
dmitted competence of the experts who have pioneered in this dif-
rritory, but they have an important bearing on whether or not a
ably increased output could have been attained in practice. On
of American experience during our participation in World War I,
ors of the Brookings study concluded that an expansion of output
15 per cent—instead of nearly 20 per cent—is difficult in the ex-
spite the encouraging effect of rapidly rising prices, the strength
me social pressures, and the powerful inducement provided by
n.

ıter encouragement as to the possible scale of increased production
"normal" peacetime level is given by our "emergency" experience
l War II. The actual increase is shown by comparing the value of
duction in the United States in 1941 (a year in which the volume
ction was highest in our history to that time) with that attained
the year of peak wartime production). Even after adjusting the
as to eliminate the effect of the rise in price level between these
, the value of gross production of 1944 exceeded that of 1941 by
5 per cent. The greater proportional expansion of output during
Var II than during the earlier one was made possible, in part, by
hat our participation in World War II was longer than in World
owing more time for organizing and directing production. There
a larger proportional increase in the labor force during World
but also there appears to have been superior, and more compre-
lanning of production by the government and by industrial con-
e greater increase in World War II is even more striking if it is
l that about twice as large a proportion of the population was en-
he armed forces during World War II.

ecord of production during both World Wars has led many people
at the anomaly, in relation to economic efficiency, presented by
ı of peace and war. The anomaly is modified—but not resolved—
sider that wartime scales of production are made possible only
overemployment of some productive factors, by some great ex-
, and by much waste. Because of the drain imposed on some of
natural resources (which will be treated in Chapter 4) we could
existing methods of production, have continued for many years
tive pace of 1944. War continues, however, to provide an ironic

and associates, *op. cit.*, p. 418.

demonstration that our productive system is capable of providing us with a larger volume of goods and services than it normally does.

A second interwar study of capacity [1] concludes that 1929 income could have been raised by nearly 50 per cent. It is far less cautious than the Brookings study, and in some important estimates it assumes that marked technological improvements can be discovered, and that superior existing techniques can be extended generally throughout an industry, regardless of conditions in the industry. For example, in examining the possibilities of expanding milk production, it assumes that average production per milk cow can be raised by 31 per cent, i.e., to the existing average level per cow *in herds of fifty cows*. It seems likely that a condition necessary to bring this about would be the concentration of cows in larger herds and the elimination of a multitude of small producers supplying individual families and small local markets. These users would then have to do without milk or solve the difficult transport and distribution problems raised by centralized production, decentralized consumption, and the bulk and perishability of fresh milk. In addition to several limitations of its own, those which apply to the Brookings study appear to apply with even greater force to this report.

Neither study attempts to explain *how* output could be raised to its estimate of "capacity." It appears, indeed, that an adequate answer to this question would have to deal with and perhaps solve all or nearly all of the problems which harass society, such as labor disputes, conflicts of interest, problems of education, inequality of income distribution, optimum rate of saving, effects of technological change, and methods of reconciling opposing political views.

RESOURCES AND STABILITY

All efforts to insure stability in the operation of our economic system must take account of the patterns of resource availability and resource use. If we exhaust vital resources and become dependent upon foreign supplies, we increase the possibility that foreign disturbances—wars, revolutions, natural disasters, and the like—may affect our economy through violent and sudden changes in supplies and prices of important commodities. On the other hand, if we follow a blind policy of economic nationalism and continue using uneconomic domestic resources while shutting out cheaper foreign supplies through tariffs and other restrictive devices, we also endanger

[1] *Report on the National Survey of Potential Product Capacity*, New York City Housing Authority and Emergency Relief Bureau, New York, 1935.

ic stability. For if foreign countries cannot sell us those products ıey produce most advantageously, they cannot buy from us, except inance them through loans and gifts. Since a flourishing foreign a most important requisite for continued economic health, we must ıred to depend upon the rest of the world for a substantial part raw materials which can most advantageously be obtained abroad. he unhappy and troubled international political atmosphere which wed the ending of World War II, those who plan for this coun- ense and safety have had to take into account our possible future many vital products, particularly metals and petroleum. Stable and duction by our economic apparatus would be impossible if a future ıd us cut off from essential raw materials whose domestic produc- adequate, and without adequate stockpiles of these essentials. In the ıgainst Germany, Italy, and Japan, the United States would have ously crippled if we had not had available relatively large stocks r, tin, and similar products obtained mainly from abroad. The pro- adequate stockpiles of such necessities against any future unwel- ıtingencies is a responsibility which has been undertaken by the overnment in the present postwar period.

a variety of reasons, therefore, our government's concern with use has grown over the past decades. When stability of prices was the 1930's, government action focused upon production controls, lified by state restrictions upon petroleum output in a number of : producing regions, or sanctioning of co-operative action by sell- ing the NRA period. During the war, many of our most important were under strict allocation control to insure that they would be d in a manner most beneficial to the military effort. In no way by the dramatic introduction of rationing, priorities, and alloca- ıs this more strikingly demonstrated than by the government's n of almost complete control over capital investment during the greatest volume of new investment going to expand war indus- e the war's close the government has become increasingly con- th the possibility of exhaustion or inadequate production of vital ·ials needed by the economy during both peace and war. As a re- ·ican corporations and individuals seeking to tap foreign resources, hey be oil in Saudi Arabia, uranium ore in the Belgian Congo, or South America have had the sympathy and sometimes active aid ted States government.

:hapter has described: (1) the way in which the market operates ine how resources will be allocated among alternative uses; (2)

the customary distribution of resources; (3) the general position of American resources relative to those of the rest of the world; (4) the way in which resources and the market influence the geographical location of various industries; (5) the extent to which we utilize the resources we have; and (6) how our use of resources affects economic stability, especially in our commercial and political relations with other nations. Some of these subjects are treated in greater detail in the chapters that follow.

:R THREE

Our human resources

\S PRODUCERS AND CONSUMERS

le are both the means and the end of all economic activity. Goods ced and are offered for sale in the market only because some people ıe labor and the capital necessary to produce and market the goods. nd of the economic process is not reached until the flow of goods :es entering the market is used to satisfy the wants of people as ;.

regard to the economic community as a whole, there are close g relationships between people's activities as producers and their ıs consumers. In the first place, the effectiveness with which labor l are applied to production determines the quantity and quality of ıduced, and consequently determines how people as consumers The way in which the proceeds of production are distributed : people also is a determining influence. For example, if produc- reased, but one group of people reaps all the benefit of the in- follows that some people (perhaps a large number) do not con- more or any better goods and services than they did before.

: second place, each person's material level of living greatly in- ıe effectiveness with which that person will apply labor and capi- luction. This relationship is a subtle one and so deserves careful on. It is not limited merely to the fact that a well-fed man can ler and better than a poorly-fed one, or that a person with an ge enough to enable him to live in comfort, and at the same time late capital, will provide more capital than one whose income is ient to meet his most pressing needs. These are obvious short- onships. An important long-time relationship is that successive

generations of people, who experience relatively high standards of living, have superior opportunities, through background and training, to become more effective participants in production. The more widespread among the members of a community such relatively high standards of living become, the greater is the potential productive capacity of the community.

A person's "standard of living" is the level of material existence to which he has become accustomed and which he desires to maintain. The desire to maintain an achieved standard of living sometimes is expressed through a limitation of the number of children in families. In primitive societies standards of living tend to be somewhat stationary in the sense that people show little ambition (and also have little opportunity) to raise their standards above those which are customary. But in so-called progressive societies (which means essentially societies in which productive capacity is increasing in relation to the size of the population) people usually try not only to maintain the living standards they have attained, but also to raise them still higher.

This brief discussion has considered only the broad ways in which standards of living affect the productive abilities of people. There are other noneconomic aspects which are at least equal in importance. Clearly there is nothing more important than opportunities to enjoy the "fullness of life" which is so greatly influenced by physical health and intellectual vigor—as well as by material standards of living. And, even in the purely economic aspects which are considered here, distinctions of a qualitative kind must constantly be drawn. Thus, to use an extreme example, a person with an income sufficient to maintain a high standard of living is free (if he wishes) to spend his time and his money in debauchery, and to neglect the care and training of his children in such wise that they also grow into useless members of the community. Moral judgments aside, such a case illustrates how possession of the means to a high standard of living does not necessarily or always assure a more effective participation in production.

THE MALTHUSIAN DOCTRINE

The significance laid upon the quantity and the quality of the population differs in different times and places. Thus the official view of population in Nazi Germany, which tried to distinguish between those who were and those who were not members of a "master race," was regarded by qualified outside observers as a sentimental invention to bolster a program of political and military aggrandizement. But the classic example of a theory of population involving substantial economic elements is Thomas Robert Malthus'

y on the Principle of Population, which appeared first in England
ıd of the eighteenth century. It offers a systematic explanation of
ıomic relationships between population and other productive re-
and has exerted an influence on people's thinking which has been
by only a few other works in modern times.

thus' central theme is that a finite earth cannot support unlimited
of any form of life, animal or vegetable. It follows, therefore, that
ɔf the population of the earth is at all times strictly limited by the
ɔf foodstuffs that the earth can be made to yield. But Malthus saw
: a natural impulse to procreate which, if unchecked, would cause
lation always to tend to exceed the number that could be kept alive
ıturally limited supplies of food. He recognized that the more in-
ıltivation of the soil, resulting from larger numbers on a given land
ld lead toward a larger total production of food. But he argued that
nt produced per capita would necessarily be smaller. Malthus ex-
ıe relation with the formula that population tends to increase in
: progression (e.g., 2, 4, 8, 16, 32, . . .) whereas the food supply
ncrease only in arithmetic progression (e.g., 2, 4, 6, 8, 10, . . .).
his view the growth of population, if not checked by what he
oral restraint," would inevitably be checked either by "misery"
gh infant mortality, pestilence, etc.) or by "vice" (limitation of
e through deliberate interference with the course of nature).

stematic discussion of Malthus' theory is unnecessary here. In
his views, and in reply to one form of superficial criticism, it may
ɛd that the decline which has occurred in the rate of population
:obably is due, in part, to what Malthus called "vice." And to
redit as a prophet of social trends is his remarkable argument that
highly industrialized nations would become most densely popu-
consequently would come to depend on outside sources for food
materials, and that these nations would go to war against each
heir efforts to gain control of these outside sources for them-

eory as limited as Malthus' can take account today of the rela-
g the number of the people, the extent of their natural resources,
: their industrial arts or technology, and their level of living. Cer-
hus underrated the effect upon the food supply of improvements
:hnology. In recent times, except under extreme conditions cre-
:r, food production has kept pace with the tremendous increases
opulation. But the ghost of Malthus is not yet laid: that popula-
t increased even more rapidly may be due to the check that he

called "vice." Students of population in recent years have recast the problem somewhat and have turned their attention toward learning more about the psychological and physical factors affecting the growth of population. They also have tried to discover what factors affect the quality of the population.

WHAT REMAINS OF THE OVERPOPULATION PROBLEM?

Malthus' doctrine is a theory of wealth—more exactly, of poverty. There has, at times, been widespread poverty in the United States and other Western countries. These cases, however, do not seem to be explained by Malthus. They appear, instead, to be due to some of the very changes in techniques of production which made possible the unprecedented doubling of the world's population between 1800 and the present. These changes so affected the economic structure of society as to make it subject to extreme variations in output. Hence it appears from time to time that there are more people needing food, shelter, and clothing than our ingenuity and effort can provide for. Yet the existence, at these times, of large stocks of wheat, meats, coffee, sugar, and the like, not salable in the market at a profit, does not suggest that the trouble is that the population is overtaking food supply.

It appears rather that the market mechanism by means of which the output of goods is regulated fails to release all the productive energies that we have. In earlier periods in economic history (and today in such countries as India and China, where overpopulation is a lasting problem) widespread poverty and want almost always were due to a shortage of production. This, in turn, was usually the result of some calamity, such as a crop failure or a war. In the highly organized market economies of today, large scale economic privation often is due to a superabundant production in relation to market demands for the goods produced. In such a case, prices drop, production falls off, and employment of labor and other productive resources declines. Privation continues, not until the next good crop, but until needed "adjustments" of the market have occurred.

If the goal of society is to raise standards of living by modifying the factors which primarily limit such standards, the task set for the student of population is clear, but difficult. He must consider, first, an unchanging land area and fixed natural resources; second, the existing state of the productive arts; and third, the market organization through which output is regulated. He must then ask himself, in the light of these data, what particular population will yield an optimum level of living for itself. Producers of commodities for the market face the same problem on a much smaller scale

ıey try to determine (given their industrial equipment and organi-
:he size of the working force which will most economically convert
v materials into salable commodities.

the student of population, as for the businessman, there must be some
less accurately determinable optimum working force. A country
›pulation is inadequate to exploit its resources is, in this sense, under-
d. If a smaller population would give a nation higher living stand-
t nation is overpopulated. Yet we should not forget that such a
t is always conditional upon existing circumstances. China with its
agricultural methods, scanty industry and poor communications
overpopulated. Suppose that China were to become industrialized
ɜriculture modernized; in such case an entirely different judgment
come appropriate.

ıS WORKERS

ır references to population as a working force we have, up to now,
hat there is some fixed relation between the number of people in a
d the number of its able and willing workers. In considering in-
decreases in the population we have assumed: (1) that the quality
pulation always means the same thing, a certain stable proportion
ed, semiskilled, and skilled workers, of farmers, of professional
ɜ) that there is a constant relative distribution of this working
ng industries and over the nation's different urban and rural areas;
hanges in the speed and the intensity of labor occur in response to
ical developments, but not otherwise; (4) that there are un-
›roportions of young people just beginning employment and older
ıg. We have assumed also that once balanced quantitative relations
:ion to land, technology, and market organization are reached,
›n in the quality of population will occur to disrupt it.

omplicating but challenging fact is that the quality of population,
y in a modern, highly industrialized nation, is exceedingly un-
.ters of concentration of population shift from decade to decade;
nd speed of work fluctuate with good times and bad—and also
xtent of union organization; the distribution of workers among
s assumes new patterns. This last occurs not only in response to
to changing technological requirements, and to fairly permanent
mand, but also as a reaction to new educational facilities, to fluc-
business, to myriad social and cultural stimuli which only re-
: been made subjects of study in this connection.

One consequence of all this is that any generalized conclusion must be carefully limited. Such a conclusion can be valid, if at all, only when made with reference to the people of a particular area for a designated period. Further, it must be recognized that at least for limited areas, of which our own eastern cotton belt is one, the existing relation of population to resources may be such that no adjustment short of mass migrations from such areas to regions of more abundant resources can contribute to improvements in living standards.

OUR POPULATION GROWTH

As world population more than doubled during the last century and a half, that part of it located in the United States rose with unprecedented rapidity from just short of four million at the time of Washington's first inauguration to about one hundred and forty-five million today. Yet our increase has not been a steady one. In spite of the continued presence of many factors favorable to population growth, the percentage *rate* of increase in this country has shown an irregular but considerable decline throughout the whole period for which we have records. (This percentage rate of increase includes the excess of births over deaths and net immigration.) Thus, while the increase in the decade 1790-1800 amounted to 35 per cent of the 1790 population, the percentage rate of decennial increase fell during the first half of the nineteenth century. After a revival during the fifties and sixties, it stood at 26 per cent for the seventies, and then declined fairly steadily to a low level of 15 per cent for the ten years following World War I. Census figures for 1940 show the decennial increase for the thirties to have been slightly more than 7 per cent. Concealed in this last figure was a definite upturn after 1933, presumably due to improved economic conditions. A sharp increase came with the onset of World War II. These rises in the rate of population growth may prove to be only temporary, but they emphasize the importance, if we wish to predict future population, of taking account of underlying causes rather than simply extending current rates of change.

Related to this deceleration of population growth has been the disappearance of the frontier and the dwindling of the supply of rich, undeveloped land. Large areas of such land, easily available for use, had, in earlier times, beckoned to the immigrant and provided all comers with the means and—for effective production—the necessity, of maintaining large families. The slowing down of population growth has accompanied, too, the development of manufacturing and service industries and their concentration in

ıere the exigencies of living from pay check to pay check, often in
l quarters, have discouraged parents from rearing many offspring.
line has occurred during the period of that emancipation of women
ɔnsists largely in their entering paid employment, submitting to the
of factory and office, and having in consequence few children.
:ently it has been influenced also by restrictions on immigration into
ıtry, restrictions which admit only a few people from the very coun-
contributed most to our population growth in former years. There
/ people who now desire to take up residence in this country, but
ional policy on postwar immigration is clarified it would be reck-
ggest what effect immigration may have upon the prospective rate
h of our population.

ɔugh the whole period during which all these changes have oc-
ıe practice of planning—that is, limiting—family size has developed
ıdoubtedly the changes that were mentioned have encouraged the
Yet it may be assumed with equal certainty that considerations
n purely economic ones have contributed to the limitation of
e.

ıPONENTS OF POPULATION CHANGE

ıistory of our population growth is a record mainly of four fac-
improvements in productivity, public health, and sanitation; (2)
methods and more widespread knowledge of birth control; (3)
ıttitudes toward parenthood; and (4) our changing views regard-
:sirability of immigration. It is revealed by the changes in our
:, birth rates, and immigration figures. The annual excess of births
ıs represents our "natural increase"; net gains or losses through
ɔn or emigration are added to this figure, or subtracted from it,
e net annual population increase. This composite item was ex-
ew paragraphs above in terms of decennial percentage increase.
ɔonse to the circumstances which seemed to make small families
ɔle and desirable, the national birth rate (i.e., the annual number
er thousand of the population) by 1940 had fallen to less than
ıf the figure for 1800. The changing ratio of children to women
rly this long-time downward trend in fertility. "In 1800 there
ɔximately 1,342 children under 5 for every 1,000 women age 20
ratio continued to fall thereafter to 1,085 in 1840, to 780 in 1880,
920, and to 426 in 1940 . . . Actually the drop in fertility is

greater than these figures indicate, for during the period there has been a decrease of over 80 per cent in infant and child mortality . . ." [1]

Because different populations contain differing percentages of potential parents, the crude birth rate described above is not the most satisfactory way of measuring fertility. Suppose, for instance, we wish to estimate the probable future trend of population in the United States. To do this, it is sufficient to consider the number of potential mothers (or fathers) alive today, and then to ask ourselves whether this group of mothers (or fathers) is fully reproducing itself from one generation to the next. The calculation can be carried out, and leads to the same result, for either sex; it is usual, however, to study mothers and their daughters rather than fathers and their sons.

Reproduction rates. The potential mothers in the United States today are concentrated in the age group fifteen to forty-nine, inclusive. Let us take the number of girl babies born this year to mothers aged fifteen, per thousand women (married or not) of that age; let us add to this the number born per thousand women age sixteen; and so on, through age forty-nine. The total gives us the number of girl babies born to each thousand women passing through the ages of potential motherhood, and is known as the *gross* reproduction rate for the population measured. Obviously, if the number born is at least a thousand, then women currently of childbearing age are approximately reproducing themselves, and the number of such women a generation hence will not be much smaller than it is today. Or, put otherwise, every thousand girls reaching the age of fifteen this year can be expected to have, collectively, at least a thousand female children before they reach the age of fifty.

The word "approximately" was used just now because we have yet to take female mortality into account. For if the gross reproduction rate is only *just* one thousand, then the potential mothers are not in fact reproducing themselves. There is no margin to spare for the small number of girl babies who will inevitably die before reaching the age of potential motherhood and for those who will die during the childbearing ages. Consequently a gross reproduction rate somewhat in excess of a thousand is necessary for a given population to reproduce itself.

These ideas are combined in the *net* reproduction rate, which is derived from the gross reproduction rate by making allowance for the fact that less than 100 per cent of the children born today will survive childhood, adolescence, and the childbearing years.

[1] Warren S. Thompson and P. K. Whelpton, *Estimates of Future Population of the* [illegible] National Resources Planning Board, Washington, 1943, p. 14.

ss and net reproduction rates for the United States are shown in Where, as with the rates for the urban population in 1930-35 and 1935-40, *both* rates are less than one thousand, no conceivable im-

GROSS AND NET REPRODUCTION RATES, UNITED STATES, 1905-1940

	(per thousand of population)			
	1905-10	1930-35	1935-40	1942-47
	Gross Annual Reproduction Rate			
Total United States	1,793	1,108	1,101	1,402
Urban	1,298	839	815	1,177
Rural nonfarm	1,956	1,296	1,294	1,586
Rural farm	2,663	1,844	1,878	2,029
	Net Annual Reproduction Rate			
Total United States	1,336	984	978	1,292
Urban	937	747	726	1,085
Rural nonfarm	1,499	1,150	1,150	1,465
Rural farm	2,022	1,632	1,661	1,859

t in mortality would enable the group to reproduce itself fully; he birth rate would also be needed. For the United States as a 1935-40, the gross rate exceeded, but the net rate fell short of, and; during those years the nation was not fully reproducing its , but an improvement in mortality would have enabled it to do 1940 a sharp rise in birth rate occurred, and during 1942-47 the of the United States was once again more than reproducing itself. se mortality has declined, the margin between gross and net re- rates has narrowed greatly since 1905-10. By far the more influence upon reproduction rates is, however, the decline in fer- rth rates. For instance, the great differences shown in the table rban and rural rates are due to the much larger number of chil- per thousand women in the country than in the towns.

duction rates were introduced into this discussion as a means of the trend of our population. Their use for this purpose can be il- follows. The net reproduction rate for the rural farm popula- 2-47 was 1,859 per thousand (Table 1). This means that, if the ation alone is considered, it can be expected to multiply itself in a 59 to 1,000 each generation, i.e., to increase at the rate of about every thirty years or so. Similarly the urban population will in- e ratio of 1,085 to 1,000 each generation, or between 8 and 9 per

ent every thirty years. Of course some of the rural farm (and also the rural onfarm) population will migrate to the cities. In any case we are most interested in the United States as a whole. During 1942-47 the net reproduction rate for the entire nation was 1,292 per thousand. Thus the most recent data suggest an increase in population of about 29 per cent each generation. Yet as recently as 1935-40 the net reproduction rate for the United States as a whole was only 978 per thousand, i.e., the population showed a tendency to decline in a ratio of 978 to 1,000, or about 2 per cent, every thirty years. It is obvious that the outlook is very uncertain. The maintenance or increase of the population of the United States, if we leave immigration and emigration out of account, depends upon whether birth rates remain at their recent high level or decline once more to the relatively low level of the 1930's.

Even if our net reproduction rate should again fall below unity, as it did in the 1930's, our population will go on increasing for several decades because, like any population which has been growing rapidly in the recent past, it contains a relatively high proportion of young people. What the figures just quoted mean is that, so long as fertility is high enough and mortality low enough for the net reproduction rate to be bigger than one, the population will continue to increase. But if the net reproduction rate should again fall below one (as it did in the 1930's) for a prolonged period, the population of the United States would eventually start to decline. Of course in making estimates of future population of any country, the probable future behavior of fertility (i.e., the birth rate) and mortality (i.e., the death rate) have to be taken into consideration.

Trends in fertility. Because of the variety of motives affecting parenthood, as well as the unevenness with which these motives influence people differently situated economically, geographically, intellectually, and socially, birth rates (and therefore reproduction rates) vary widely among different sectors of the population. We have already noticed the sharp contrast between urban and rural areas (Table 1). It has been found, too, that wealthy people have fewer children, typically, than poor ones; and persons with little schooling are more prolific than those with much. The consequence of these particular variations in fertility is that the task of maintaining—to say nothing of increasing—the population of this country is taken on by the people who are poorest in wealth, education, and hope for the future. The National Resources Committee reported in its study of population problems in 1938 that, "for the United States as a whole, fertility in the poorest areas is 77 per cent in excess of that necessary to replace permanently the popu-

n those areas. This stands in contrast to a deficit of 17 per cent in the
/ith the highest level of living."

'ends in mortality. The trend in death rates has also been downward.
ath rate in the United States has declined since before 1900; the only
ption was caused by the influenza epidemic of 1918. It now stands at
: level than ever before in the country's history. The average annual
ate for 1936-40 was 11.0 per thousand, compared with 16.5 per thou-
)r 1900-04. This fall has been made possible by improvements in
)n and advances in medicine which have facilitated control of such
ic and infectious diseases as smallpox, typhoid, meningitis, and diph-
At the same time there has proceeded a steady reduction in the num-
deaths per thousand from the infectious diseases to which young
1 are especially subject. Unfortunately, success has not been achieved
ronts. Maternal mortality, reducible in many cases if adequate pre-
re is available, still takes a toll of about six mothers in every thousand
ty cases. The expense of the needed medical attention is a principal
to improvement here.

ıer cases in which high specific rates prevent further reductions in
:ral death rate are to be found in the record of mortality from diseases
ıeart, cancer, and diabetes. These affect the older members of the
on most, and their occurrence has risen—spectacularly in the case of
seases. The significance of the effects of living conditions upon
; indicated clearly in the growth of heart-disease casualties. The
adjusting to the mechanical, high-speed, often-interrupted tempo of
modern industrial society is becoming too great for ever larger
of people. This strain is evidenced also by the failure of the rate of
ue to accident to fall significantly despite efforts for accident pre-
in traffic, in places of work, and in the home.

these records must not be misinterpreted. As relatively more chil-
ceed in surviving the hazards of their early years, relatively more
grow to maturity, when of course they become subject to the less
ble onslaughts of the diseases of old age. As the relative number of
infancy declines, the deaths among older-age groups will rise. The
s may be expressed in terms of life expectancy at birth. In 1900 life
:y at birth was about forty-eight years. By 1940 it had risen to sixty-
s. The greater the improvement already made, the less further im-
ıt, of course, may be expected. If we assume moderately steady ad-
medical diagnosis and treatment of disease, we may anticipate
vement in life expectancy at birth to not much more than sixty-

eight years by the year 2000. For women—who, on the average, live longer than men—it had almost reached this figure in 1948.

Immigration. In this analysis of net annual population increase, account remains to be taken of immigration. Encouraged actively in the latter half of the nineteenth century by the industrial builders of this nation, and attractive also for other reasons to the peoples of disturbed or unprosperous European countries, migration to this country until recent years made substantial contributions to its population growth. The immigrants of that time were fertile, had a disposition to concentrate in cities, and had also a readiness to accept low-paid employment in our growing industries. They played an important role in both the industrialization and the progressive urbanization of the United States. Unless a highly improbable reversal of opinion occurs in this country, quota restrictions similar to those adopted by Congress in the twenties will continue to limit such influxes. The curtailment of immigration, which was reflected in the change from a population gain from this source of over three million in the decade 1900-10 to a gain of less than three hundred thousand in 1920-30, indicates that the influence of immigration on our population declined sharply. Indeed, in the period 1931 to 1936 alien emigration from these shores exceeded immigration by more than one hundred thousand. Between 1937 and 1940 there was an annual gain of about forty-three thousand immigrants. With the coming of America's participation in World War II both emigration and immigration were reduced to a trickle.

However, as wartime restrictions were eased, immigrants began again to reach our shores, principally from Europe. In 1947 and 1948 immigration was adding almost two hundred thousand persons yearly to our population. Moreover the passage of legislation to facilitate the admission of displaced persons appeared to insure that this movement would continue.

OUR FUTURE POPULATION

Because of varying birth rates, death rates, and immigration, it is extremely difficult to prophesy the future growth, or decline, of population. In predicting trends in population, assumptions must be made concerning fertility, mortality, and inward and outward migration.

The restrictive policy this country has adopted concerning immigration suggests that for the immediate future, say for at least the next twenty years, our population will not receive a greater addition from this source than existing quotas permit. Indeed, in estimates of future population made by the National Resources Planning Board it is assumed that fluctuating

nic and political conditions here and abroad will militate against our
ng more than two-thirds of allowed quotas. This assumption would
e an annual immigration of not more than one hundred thousand
. The curve of future population growth may consequently be said
nd almost entirely on what happens to fertility and mortality.
oreover, in view of the increasing life expectancy that we have won
ast, it seems probable that improvement will continue in this regard,
from more complete application of methods employed up to now.
ame time, much of the success has been limited to lessened mortality
the early years of life. This suggests that the task of reducing death
older groups will become increasingly difficult. The final conse-
in terms of the national average death rate will probably be some
reduction, gradually leveling off.

phecy concerning birth rates can be made with much less certainty.
e more subject to individual control than death rates. They conse-
not only show greater fluctuations over time than do death rates,
also can be made to fall more, or rise more, than the latter in any
od. The accuracy with which population trends can be predicted
country depends primarily, then, on ability to foretell how many
the average woman of childbearing age will produce.

, of course, depends upon the number of children which couples
have, and also upon the extent to which information concerning
trol is disseminated. Resultant birth rates will be partly determined
ccess in achieving satisfactory postwar economic readjustment and
ining a measure of economic security. They will be affected also
ill continuing trend toward urbanization and other forms of in-
gration and development. International security may affect the
through its influence on immigration and its effect on the willing-
mericans to accept the responsibility of rearing families. Finally,
opulation decline, it is possible that the services and allowances
ided by government for the care and upbringing of children may
mented in order to counteract the trend. Other countries have
uch measures as a matter of explicit national policy, in some cases
ast short-time significant effect upon birth rates.

he purposes of estimating the future course of birth rates in the
ates, assumptions must be made which recognize, even if they
curately take into account, all such factors. The reversal of the
trend in the national birth rate since 1933 makes unlikely any
pitate decline of the rate over the coming decades. On the other

land, continued urbanization and the spread of birth-control practices suggest fewer births.

On the basis of such considerations as these, the National Resources Planning Board offers estimates of future population which indicate that with assumptions of medium fertility, medium mortality, and an annual immigration of one hundred thousand persons, the population would rise to a plateau of about one hundred and sixty-six million during the years 1990 to 1995;[1] a subsequent slow decline would be probable.

The proportions of people in the older-age groups will rise during the period immediately ahead. This change in age distribution is no new phenomenon; it has come about with lowered birth rates and the lengthening of average life expectancy. Between 1900 and 1940, for instance, as the whole population increased 73 per cent, that part of it under twenty years of age increased only 34 per cent; the number between twenty and forty-five increased 79 per cent; and the number forty-five years and older increased 160 per cent.

The age distribution we may expect in the future if we assume medium fertility, medium mortality, immigration as previously indicated, and neglect war losses, is shown in Table 2.[2]

Table 2 AGE DISTRIBUTION OF UNITED STATES POPULATION, 1940 AND PROSPECTIVE FUTURE YEARS

	Population in thousands				*Percentage distribution*			
Year	*0-19 years*	*20-64 years*	*65 years and over*	*Total*	*0-19 years*	*20-64 years*	*65 years and over*	*Total*
1940	46,170	77,343	9,020	132,533	35	58	7	100
1960	48,624	91,117	13,614	153,355	32	59	9	100
1980	46,279	100,515	18,564	165,358	28	61	11	100
2000	43,379	101,664	21,589	166,632	26	61	13	100

It is to be noted that the number and the proportion of persons in the economically most productive age groups, those between ages twenty and sixty-five, will be somewhat larger in the future than they are now. If our

[1] This estimate does not allow for war losses, but the modification made necessary by casualties during World War II would be very slight and would not significantly affect the trend.

[2] An estimate which took account of casualties in World War II, and also of the high fertility during 1940-45, would give a population of about 171,000,000 for the year 2000, or 4,000,000 more than in Table 2. The assumptions are the same as in the text, but "medium fertility" has been interpreted more generously in the light of experience during 1940-45 (P. K. Whelpton, *Forecasts of the Population of the United States*, Washington, 1947).

mechanism can be sufficiently improved, this proportional increase
ıctive labor force may lead to higher levels of living than we now
:t should not, in any case, be assumed that the tendencies we have
d bode only ill. Any improvement of living standards, in this regard,
upon the efficiency with which we meet the specific problems pre-
y an aging population and one whose growth is slowing down.

TION CHANGES AND PRODUCTIVE RESOURCES

ing the coming decades we may expect to see the relative size of
king force increase (defining the working force as the number of
women between, say, twenty and sixty-five years of age who
ikely to seek employment). Our capacity to produce goods and
will accordingly tend to rise also. Only if other factors of produc-
ıital equipment and land—including the properties of the soil, nat-
ısits of useful materials, and productive sites) are not capable of at
llel development shall we have any reason to anticipate less than
ionate rise in the total output of goods and services. Technological
in recent years in agriculture, including soil conservation and im-
ıltivation, offer grounds for optimism that the properties of the
not be a restricting factor. Similarly, reclamation projects have
ropriate a redefinition of the concept of the "frontier." We have
new frontier settlements in the Tennessee Valley, the Columbia
ley and the Southwestern states; similar development of the Mis-
r Valley can stretch the limits of settlement and production still

respect to the possibility of expansion in the output of natural
tural raw materials, the prospect seems somewhat less assuring.
of our remaining coal and oil reserves, to name only two such
ıave a way of varying unpredictably from decade to decade as
are discovered and new techniques of extraction are perfected.
:m may become critical in some materials, if their exploitation is
lled or if they are not supplemented by foreign supplies. If we
dly follow a policy of restriction in international trade, we would
our future living standards to the extent that they depend upon
lity of domestically scarce raw materials.
ıpter 6 will show, the availability of capital is much more likely
d by the effectiveness of our methods of economic organization
ıysical factors. Economic organization, too, has an important
:he problems with which a growing working force—an increased

abor supply—may present us. Given adequate land, materials, and capital, in increased labor supply will mean increased output if workers and jobs :an be brought together.

OCCUPATIONAL AND GEOGRAPHIC MOBILITY

This raises the problem of labor mobility, both among different occupations and among different geographical areas. As technology develops, demands for various types of labor change. Men unable to meet the new requirements suffer technological displacement. In a growing economy jobs are opening up all the time, as new industries develop and as demand increases with population. Often, in such an economy, the proportion of the labor force in a given occupation can be altered through a mere diversion of the stream of new entrants into industry. If technological displacement or a stoppage of growth occurs in any one occupation, young people leaving school or college will look elsewhere. This alone may suffice to adjust the number of workers to the new requirements. At the very least, the number of workers who must actually change their occupation or place of residence is minimized.

Contrast this situation with that posed by a population and labor force which are stable or declining. The annual flow of new recruits is relatively small, in comparison with the existing labor force. Less can be achieved by redirecting the flow of entrants into industry; since increasing population is no longer adding to the demand for goods, a given change in technology is much more likely to force workers to switch to new types of work, possibly with a need for new skills. Moreover, such a population contains (as we saw) a growing proportion of older workers to whom retraining and readjustment are more difficult than to younger people. When technological displacement occurs it is likely to be more protracted for older workers than for younger. For all these reasons a cessation of growth, still more an actual decline, in the population of the United States is likely to intensify the problem of adjustment to technological change.

How much we can do about this is hard to say. The solution may lie in insuring that the total demand for goods and services will be supported or stimulated by government if private industry should fail to develop new jobs, partly in insuring that measures be taken to improve occupational and geographic mobility, especially of older workers. Acceptance by employers or by government of some part of the costs of workers' moving themselves and their families would increase geographic mobility. Job information centers already contribute to both geographic and occupational mobility, but

ny cases where men must change their occupations, technical retrain-
ograms are essential. If an over-all shortage of jobs exists, the problem
of raising the general level of economic activity, and so merges with
neral question of employment opportunity. For, of course, no efforts
›rove workers' mobility can do more than lubricate the channels of
ıent from one job to another.

› much for what the future may hold in store. Further light on the
ns we as a nation may encounter in this field is best obtained through
· of what has gone before. We shall be concerned in what follows,
ith the occupational shifts which have led to the present distribution
·kers among our industries; second, with the geographic mobility
›ple have displayed under changing circumstances; and third, with
training necessities implied in continual industrial change.

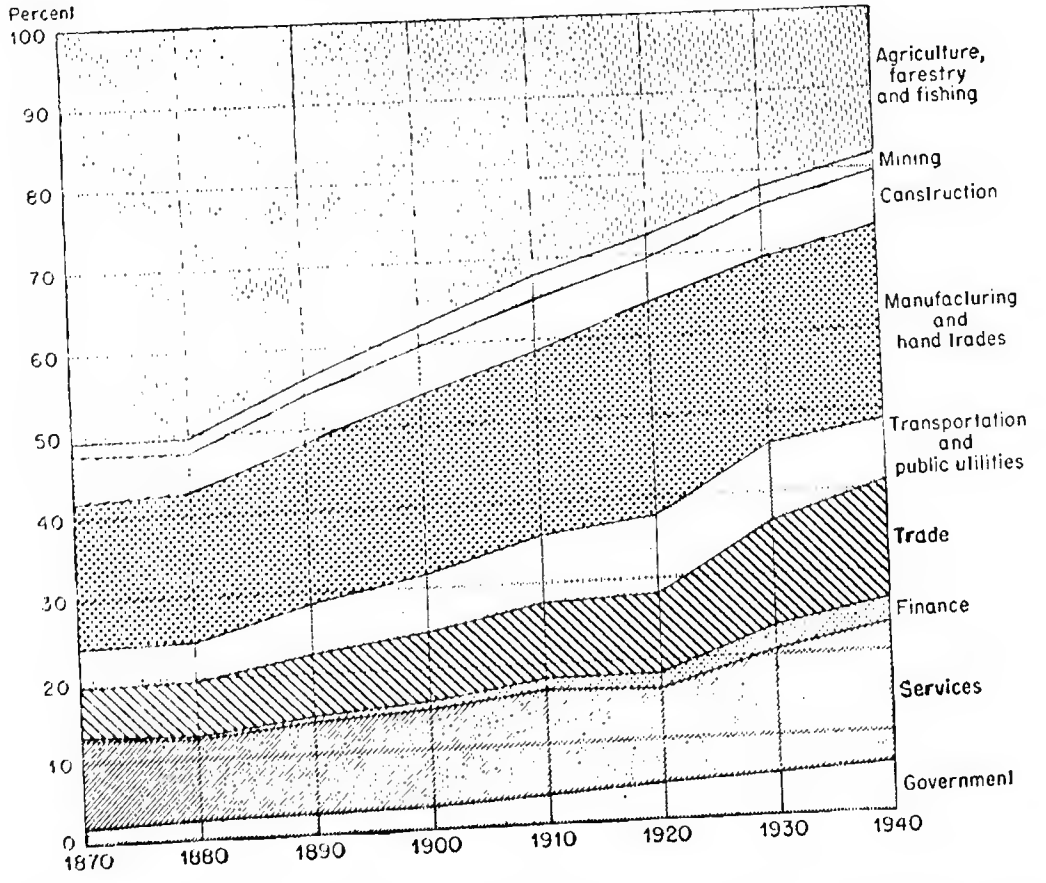
RIAL DISTRIBUTION OF THE WORKING FORCE

e most striking feature of occupational shifts between 1870 and the
has been the great decline in the proportion of the labor force en-
ı agriculture (including forestry and fishing). In 1870 just over one-
ıll workers were occupied in this industry, yet by 1940 slightly less
·-fifth were so employed (see Fig. 1). During this period the physical
of agricultural production per capita of total population remained
onstant. At the same time, as we have already seen, total population
reased threefold. Thus, although the number of agricultural work-
ased only about 30 per cent, productivity per worker so increased
cultural output per capita of the population was maintained. After
ıreover, not only did the percentage of workers in agriculture fall,
bsolute number also diminished. The number in 1940 was actually
› million less than it was in 1910.

drop in the relative importance of agricultural pursuits has been
ıied by a rise of employment in manufacturing and mining from
nt of the whole in 1870 to 26 per cent in 1940. In contrast to agri-
n these fields production per capita of total population increased
about four and one-half times as high at the end of the seventy-
›d as it was at the beginning. Thus, while the increase during this
the number of persons employed in these industries was approxi-
·efold (somewhat greater than the increase in per capita output),
ılation increased about three times. Hence, output per worker
: increased in almost the same proportion as population, that is,
ıreefold.

When the records of the agricultural, manufacturing, and mining groups are combined, a further significant condition is revealed. Whereas in 1870 just 70 per cent of all workers were employed in one or the other of these groups, only about one-half of the working population was so employed in 1940. In this change are reflected the tremendous increase of transportation,

Figure 1 **PERCENTAGE DISTRIBUTION OF THE LABOR FORCE BY INDUSTRY, 1870-1940**



communication, and trade to which the last quarter of the nineteenth century and the first half of our own have been witness. Constituting only 9 per cent of all employment in 1870, the combined groups engaged in transportation, communication, and trade expanded (both in number employed in particular occupations and in variety of occupations) until, by 1940, their percentage of the labor force had more than doubled.

Thus there is an important area of employment which is not directly concerned with physical production. Just as agricultural, manufacturing, and mining pursuits may be taken as representative of physical production, transportation, communication, trade, and clerical occupations be

to represent the distributive services. The two are closely related. ut the improvements which occurred in land and ocean transporta- :eat increases in the volume and rapidity of shipment of goods would ve been possible. Advances in railroad and ocean transportation also ed communication by mail. Without developments like those in the ɔh and telephone industries which brought raw material producers, cturers, wholesalers, retailers, service agencies, and consumers into ontact with the markets in which they buy and sell, growing quanti- :ommodities could not have found markets and would not have been :d.

:dit for these gains in volumes of physical production must conse- be assigned in large measure to the transportation, communication, vice groups. Their growing importance is shown clearly through son with the other main fields of employment for the decade of the . Employment in agriculture continued its decline during these ten d was joined for the first time in this downward proportionate move- employment in manufacturing industries. The latter fell from 26 of the whole in 1920 to 23 per cent in 1940. These losses were by corresponding gains in the relative importance of trade and :ation, of clerical service, of domestic and personal service, and of :ssions.

or the future, the employment trends we have studied indicate that ctive branches of production—that is, agriculture and mining—seem gradually to offer fewer job opportunities. The number of open- ıanufacturing and mechanical industries may increase somewhat, ıbly not enough to provide work for our slowly growing popula- t promise is held out by the segments of the economy which have e greatest expansion during the past two decades. These are the ıgaged in trade, in finance, in governmental agencies, and in ren- 'ect services to consumers.

would seem to be true even if account is taken of occupational :h occurred during World War II, for most wartime shifts were of ncy nature. Manufacturing employments increased greatly during :cause of demands for war output. Agricultural employment was and would have been higher were it not for the needs for man :ssential manufacturing industries and in military services. Certain ınderwent dramatic expansion, notably shipbuilding and aircraft. re as drastically curtailed (construction is the outstanding ex- t many consumers' goods industries were also sharply contracted.

Since the close of the war there has been a marked movement toward the resumption of prewar occupational patterns, although changes in relative volumes of employment in the general categories we are examining here seem to have occurred.

WORK BY WOMEN AND CHILDREN

Changes in the age distribution of the working force have accompanied the long-term shifts in industrial distribution. Most remarkable is the decline in child labor. In 1890 almost 6 per cent of males in the labor force were in the age group of ten to fifteen years. By 1930 only 1 per cent came from that age group. By 1940 the contribution of this age group to the labor force was so small as to justify the Census Bureau in omitting it as a separate group and beginning its analysis of labor-force age distribution with workers fourteen years old. In 1890 slightly more than 10 per cent of females in the working force were in the ten- to fifteen-year age group. By 1930 less than 2 per cent came from that group. By 1940 the proportion had become insignificant. This great decrease in the percentage of workers coming from the lowest age groups has been due in large degree to legal restrictions on the employment of youth in certain occupations, to the provision of educational opportunities on an increasing scale, and to an increase in school attendance requirements.

It is generally recognized that there has been a significant increase in the proportion of women in the working force during recent decades. From 1890 to 1940 this proportion rose from 17 per cent to 24 per cent. This increase has been stimulated by improvements in homemaking facilities and by urbanization and the consequent reduction in the size of family dwelling units. The decline of the birth rate and the consequent decrease in family responsibilities have been contributing factors. The rise in clerical employments and technological advances which have reduced our reliance on heavy manual labor have opened to women occupations previously not available to them. Perhaps the most compelling influence of all has been the assumption by agencies outside the home of many of the tasks that formerly were the duty of housewives: food preparation, laundering, baking, sewing, and cleaning are conspicuous examples. These agencies render services that relieve the tedium of housework, but securing their services often requires that wives and daughters be "gainfully" employed in order to supplement family incomes. Indeed, the variety of causes to which we may attribute this increase in women's contribution to the working force make it suffi-

apparent that what has occurred is no mere statistical change, but a far-reaching alteration in the pattern of our society.

APHICAL DISTRIBUTION

ernal migrations. The occupational redistribution which has occurred e period just examined has been associated with a geographical redis- n of population. The latter trend has resulted both from varying ıd death rates in different parts of the country which cause popula- some places to grow faster than in others, and from domestic and ional migration.

vements of population can often be traced quite definitely to eco- ıducements. People move from places where job opportunities are ınattractive to other places where they are more promising. In the rt of the seventy-year period beginning in 1870, the West still of- onomic opportunity to workers and their families living east of issippi. A contrary pull on some of them was exerted by the grow- stries of the Northeast and Great Lakes regions. However, the eco- otive cannot be supposed to have been the only one affecting mi- The healthful life and the adventure held out by the West doubt- their influence on the growth of that section, while the amenities fe, including educational and social advantages, can reasonably be onsible for attracting people from rural to urban areas. Here as pportunities for leisure activities, presence of friends or relatives, concerning the character of neighbors and associates, and other ctive considerations affected people's decisions about changing l jobs.

over, improvements in transportation, first by railroad, then by e, made it increasingly easy for people to move. With movement facilitated, weaker and more numerous motives could now be- ctive. This applies with particular force to economic motives. Eco- erentials, in the sense of the relatively greater material promise egions, did not have to be as large as formerly to induce move- the lower costs of transportation, and the increasing diffusion of ıntages over our settled areas, made migration a more casual af- ever had been before.

ıtly, it is not possible to explain geographical changes of popula- y in terms of changing economic opportunities. It is equally im- explore all the motives which might serve to explain such move- at is practicable is to associate the main changes in population

distribution which have taken place with the salient economic circumstances under which they occurred. Where specific population shifts and particular changes in economic conditions occur together, the economic motive may be assumed to be the dominant one.

The changing pattern of population distribution. The movement into the West which characterized the whole nineteenth century is a familiar one. After the settlement of Oklahoma about the end of that century, no extensive virgin territory remained to be opened. Yet the capacity of the West to support a larger population had by no means been exhausted. Recent industrial expansion in Texas, a great growth of diversified agricultural communities in the Columbia River area, and postwar efforts in California to retain a position of leadership in the war-stimulated aircraft industry, indicate that the slowing down of migration into the West which characterized the first decades of this century is only a slowing down and in no sense a cessation.

While the nineteenth-century westward movement was in progress, the counterattraction of rapidly growing industrial cities in the Northeast and Great Lakes areas was becoming stronger. In their gains, moreover, the Pacific Coast states were sharing. By the time the agricultural frontier had reached its limit, population movements had set in from the interior regions to both sea coasts and to the North Central states, as well as from the old South to states in the Northeast. Beneath these large movements are concealed innumerable crosscurrents and detours. The extent of the moving propensity of the American people is suggested by the fact that in 1930 about 23 per cent of them were living outside the states in which they were born. Again, between 1935 and 1940 more than fifteen million people, almost 12 per cent of the total population, moved out of counties in which they resided on April 1, 1935.

Migrants to new farm areas and to cities came principally from older farms and from Europe. By the twenties the previously very slow absolute growth of the farm population had turned into an absolute decline. There was in this decade a net movement from farms to cities which exceeded the natural increase of the farm population by more than one million persons. This accounts for the fact that although the increase of sixteen million in total population for these ten years was principally due to the high birth rates on the farms, it was the cities—to which farm people migrated in great numbers—that showed a large net gain in residents.

Table 3 records the rapid development of cities and the corresponding shift of population out of rural areas. Compiled from our last five censuses,

these figures reveal the socially and economically significant trend toward concentration in cities of great size or in metropolitan zones which include a large city at the center and a cluster of smaller ones dependent upon it.

Table 3 **PERCENTAGE OF POPULATION IN URBAN COMMUNITIES, CLASSIFIED BY SIZE, AND IN RURAL AREAS, 1900-1940**

	1900	1910	1920	1930	1940
Places of 100,000 or more	18.7	22.1	25.9	29.6	28.9
Places of 2,500 to 100,000	21.0	23.6	25.3	26.6	27.7
Rural areas	60.3	54.3	48.8	43.8	43.4
Total population	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

uch great cities and metropolitan zones are important for the economic ıd social unity they represent. The multiplication of services and variety f commodities which are obtainable only in these large, well-knit markets, ıve served to foster the very concentration essential to their development. s this concentration feeds upon itself, reconciliation becomes ever more fficult between space limitation and demands for open air and comfort on e one hand, and, on the other, enjoymeht of the advantages of intensive :y life. The mushroom growth of suburban areas, and of smaller cities ɔund the edge of larger ones, represents one compromise with this conflict.

ıPULATION REDISTRIBUTION SINCE 1930

Curtailment of economic activity in the cities during the depressed ly years of the thirties had two principal effects. First, it resulted in a back-to-the-farm movement of slight proportions. Second, it deterred vement into the cities by members of the farm population who in more sperous times would have migrated. The consequence was that between o and 1940 the farm population, after declining during the preceding ade, actually increased slightly. In 1932 there was a net movement from an to rural areas of some 266,000 people. This net gain of agricultural ulation was due more to a decline in the number of people moving from l to urban areas than to an increase in the opposite movement. The mi- ion farmward, while large, was not entirely without precedent. In 1927, example, almost as many people moved from cities to farms as in 1932, there was a substantial movement in that direction throughout the 1920's. ı before the crisis of 1929, farm migrants did not always find permanent jobs and sooner or later returned to the fair certainty of securing at

least subsistence in the places they had left. Moreover, much of the later movement to farms occurred in agricultural areas surrounding manufacturing and mining centers and represented efforts to tide over the depression rather than to send down permanent roots into the soil.

With the worsening of the agricultural situation, persons without means found their dilemma increasingly acute. With erosion, drought, and crop-reduction plans depriving them of livelihood on the farms, with factories and shops often closed in the cities where they were located, these people had no hope of improving their lot by remaining where they were. They consequently took to the road, transients until an opportunity of employment should appear.

Differences among states and cities in their handling of relief clients frequently determined the roads the transients would travel. The result was a general tightening of relief requirements and the erection of interstate barriers to migration of persons unable to support themselves. In 1933 there were an estimated million or more of such transients. Although their plight has been dramatized by playwrights and novelists, the dramatization merely highlights the general economic frustration of the period.

During World War II farming communities lost population to the cities as farm workers took advantage of highly paid employment in war industries. General prosperity in the immediate postwar period, if no other factor, will probably operate to prevent at least temporarily any appreciable return to the farms. Whether or not the growth of cities will continue, or the migrations from the nation's central areas to its periphery will go on, depends upon several factors. These are: (1) the extent to which the level of national prosperity may be raised and urban job opportunities increased; (2) the policy to be followed regarding immigration, a factor which during recent decades did much to increase city populations; (3) the degree to which industry may in future encourage decentralization of population; and (4) the course which birth rates on farms and in cities respectively will follow.

This consideration of the connection between occupational shifts and population redistribution has emphasized the multiplicity of factors which affect population mobility. The simplest explanation of movement, a pecuniary differential between two jobs of the same type in different localities, seems strongest when applied to the early nineteenth century, a time when our occupational structure was not changing rapidly but the extent of our territory was. Yet even this does not fully account for the spread of western settlements or the movement to this country of immigrants who took up quite new occupations upon arriving, and who in any case may be

said to have been as much repelled by conditions in Europe as attracted by pecuniary advantages here. With regard to migration between countries, religious and political motives may be quite as effective as economic ones.

SHIFTS AMONG OCCUPATIONS

As to the movement of people into occupations and between jobs, some facilities have been provided by community action. Considerable success has attended efforts toward meeting the needs of young people for initial training and of older workers for retraining. Our secondary schools are, on an ever broadening scale, offering instruction in the use of basic machinery and tools, and in processes and disciplines needed for entering industrial fields. Information services keep students informed of the trends in job openings. Studies are made of shifts in occupational distribution and of changes in the rates of growth of our nation's industries. These studies are carried on by such agencies as the United States Employment Service and the Federal Committee on Apprenticeship of the Department of Labor. These agencies co-operate with employers and with labor unions in efforts to find for older workers jobs they are qualified to fill, or to train them to meet the new requirements arising from changing technology.

During World War II, governmental agencies concerned with the mobilization of man power for war production, and military departments concerned with training men and women in the skills required in modern warfare, developed training programs and information services that have peacetime significance. In addition, the federal government has made an effort, not only to restore military personnel and war workers to their former employments, but also to train veterans for employments for which they were not previously qualified. The work done includes rehabilitation training for handicapped veterans, on-the-job training for veterans desiring immediate employment, and educational subsidies for all veterans desiring them. Many of the programs undertaken by veterans are for purposes of general education without specific vocational direction. Such programs will serve as preparation for a wide variety of employments which otherwise would be beyond the reach of the students following them. Other programs, especially provided for handicapped veterans, are vocationally oriented. The administrators of these programs are committed to maintain a continuing survey of employment opportunities and to guide veterans into fields where the promise of future security seems greatest.

CHAPTER FOUR

Our natural resources

The events of World War II focused American attention upon natural resources. Within a few months, the ravenous demands of global warfare shifted the urgent problems of our economy from bothersome surpluses of raw materials and energy to desperate shortages in almost every field. Gasoline rationing, dimouts to save electricity, strict allocation of scarce commodities: these and other measures were needed to ensure the resources needed for victory. Only after V-J Day did the American people learn that without the enormous hydroelectric power available from the Tennessee and Columbia river developments it would have been impossible to manufacture the atomic bomb.

War dramatized the role of natural resources in determining this nation's economic and military might, but these same resources are also the foundation of our peacetime economy. During a military conflict scarcity of resources may mean defeat in battle; in peacetime abundance of natural resources is an important requirement for a high and rising standard of living. At all times the wealth to be found above, on, and under the earth furnishes the basic materials with which men work to provide for themselves, their families, and their posterity.

THE HISTORICAL BACKGROUND

No country has been more fortunate than the United States in the stock of natural resources available to satisfy peoples' needs. From the very beginning of this country's settlement by Europeans, the riches of the earth's cover and the wealth underground have been among the most potent lures inducing people to come here across thousands of miles of land and ocean. After the Eastern Seaboard had been settled, the promise of rich

esources in the interior led men to cross the mountains, prairies, and nd in little more than a hundred years fully occupy the rest of nent.

mere recital of the kinds of people who took part in the settlement ca gives clues to the diversity of nature's treasures in this land. farmers, raisers of sheep and cattle, lumbermen, miners, these and me eagerly. So rich was the land that men felt that the resources w country were inexhaustible, and often exploited them with little of the future. We who have come after these pioneers, and our its after us, must face the problems raised by the fact that even red nation has limited resources. Wasteful squandering of the hes must give way to economical use and rational conservation ill remains.

e centuries ago only a million Indians and a few thousand white ited what is now the United States. This country's unprecedented population, and the high living standards that have been achieved, made possible by the rich resources at our command and the vth of the industrial arts. As our knowledge has increased we have earth more fruitful and discovered increasingly useful employ- each of the available resources.

OF NATURAL RESOURCES

zation of resources. Natural resources have various characteris- affect the ways in which they are used and which also influence zation of our economy. Thus all resources, considered from the iew of what each contributes to production, are *localized*, and iem are distributed most unequally. This is true even with land; r nation has land, there are wide differences in the uses to which erent nations—or within a particular nation—can be put. Minerals, water power, forests, all these are distributed unevenly over the e globe. Petroleum, for example, is relatively abundant in the es and Saudi Arabia while it is exceedingly scarce in Switzerland ny. The distribution of localized resources among the countries d is one of the major factors determining the relative economic d prosperity of different nations.

tible and permanent resources. The degree to which various re- exhausted as they are used by man is one of their most impor- itiating characteristics. Some few resources by their nature are exhaustible in the foreseeable future. Others, once employed,

can never be replaced by man, and substitutes for them will have to be found when they are no longer available. Still a third group of resources can, if used wisely, be made to serve for centuries, but if used unwisely may be exhausted or made valueless within a few decades, or even a few years.

Water power is one of the relatively few sources of wealth which can be used indefinitely without exhaustion. As will be seen later in this chapter, the exploitation of water-power resources as an integral part of a comprehensive water-use program actually serves to safeguard the resources of a particular river basin, or other region, against the hazards arising from unwise exploitation of farm and forest land.

At the opposite end of the scale are the mineral riches of the earth. Some of these, such as sand and salt, are so abundant that their exhaustion in the present geologic age seems unthinkable. Most of the more important minerals, however, are available to us only in definitely limited quantities and, once they have been used, can never be replaced. An oil well drained dry, or a copper mine denuded of its metal-bearing ore, cannot be reproduced within the longest period for which men can plan.

Many of our most important sources of wealth are midway between these extremes. The fertility of the land itself, the forests and animals on it, the fish in the rivers and streams, all are resources whose continuous contributions to man's welfare depend ultimately upon the way in which we harvest them. A farmer who plants cotton on the same soil year after year and does nothing to replace the vital elements removed by each crop soon finds his land worn out, incapable of yielding anything like the same high production it did at first. This land can be restored to its former fertility, but only after it has been planted to crops which will restore the elements removed by the cotton. A forest whose trees have been ruthlessly cut down cannot give wood again until decades have passed and a new crop of trees has been planted and grown.

Properly employed, however, land and the riches on it can be made to serve man indefinitely. With the proper crop rotation and use of fertilizer, a farm can produce valuable crops decade after decade. A forest whose trees are considered an annual crop may be cut year after year with no diminution of yield, so long as the area cut each year is replanted and its trees permitted to grow to full size. Our conservation laws seek to force hunters and fishermen to restrict their takings to an amount which will permit game animals and fish to reproduce themselves and remain available in large numbers.

Economic and uneconomic resources. Another important classification of resources is their division between economic and uneconomic. This distinction, with regard to productive factors in general, was drawn in Chapter 2; it may properly be illustrated here, however, with regard to natural resources. When copper sells for six cents a pound, it is only worth while to refine the richer copper-bearing ores from which the metal may be obtained relatively cheaply. When the price rises to fifteen or twenty cents a pound, many ores which were formerly uneconomic become economic and can profitably be worked to produce copper. Perhaps an even better example is provided by uranium ores, which, so long as uranium was used primarily for luminescent paints and other minor purposes, had no great value and were not sought. Since the discovery that uranium may be employed for purposes of atomic fission, virtually all ore from which uranium may be obtained has become economic and is now included among the most important resources of every major country. Changes in technology, people's tastes, business conditions, and other factors alter the relative valuations society places upon different resources, thus determining which it is worth while to use and which it is not.

In the pages which follow we shall consider each of the major resources available to this country at present, including land, sources of energy, metals, and forests. We shall inquire into the amount and adequacy of the supply of each available, the problems which must be solved if we are to enjoy these resources in the future, and the impact of recent developments upon the manner in which we use them. Throughout this discussion we shall find that continued discovery of new, superior, and more economical ways of using natural resources has led to the production of greater quantities and varieties of goods and services desired by people.

THE EARTH'S ORIGINAL COVER

The land area comprising what is now the United States, before the white man set foot on it, was able to support a population (even a much larger one than it had) although the technology of the time and place was most primitive. This was so because the land was fertile, the climate good, and the rainfall adequate in almost every region.

About 48 per cent of the original cover of the earth was unbroken forest. Another 38 per cent was in strong grasses, 11 per cent was in the shrubs and vegetation of the arid plains, and less than 3 per cent was in desert. The forest land stretched from the Atlantic Coast as far west as the Mississippi River, and was particularly heavily timbered in the present New

England states and in the South. From the Mississippi westward to the one hundredth meridian (covering fully one-sixth of the area of the whole country) spread the broad rolling Prairies, richly clothed with grass that concealed a heavy black loam. The tributaries of the Mississippi-Missouri river system flowed through the region, rainfall was abundant, and the natural grasses grew high.

Beyond the one hundredth meridian to the foothills of the Rockies lay the region of the Great Plains, encompassing another one-sixth of the country's area. Here the rainfall was less than twenty inches a year and the grasses were shorter. But forest covering the foothills of the Rockies protected the smaller streams of the region. The grasses were able to grow; and the buffaloes of the plains, combined with vegetation, furnished the Indians with all the simple necessities required to support life. Farther west, in the arid regions of the Great Basin, lay desert land, because the Rockies stopped the rains; here sagebrush and cactus grew and covered the land.

Before the coming of white men, a natural rhythm was maintained in which land and water took part. The rains and snows fell; vegetation grew; grasses, shrubs, trees, and rotting logs and leaves caught and held the waters. Low-lying flat lands were converted into swamps and marshes; ponds and lakes filled up on sloping surfaces; water was stored beneath the surface of the earth because its cover remained untouched. The flow of water to the sea was thus regularized; and, on the other hand, in dry periods, streams were fed from underground springs and seepage.

UPSETTING THE NATURAL CYCLE

The white men upset this cycle. They cut the trees, drained the swamps, plowed the land and grazed meat animals on the plains. In the process, they erected cities, diverted and controlled streams, delved deep into the earth—and peopled the land with more than 140,000,000 inhabitants.

Building an industrial civilization has changed radically the character of the earth's cover. The original forests have been largely cut; the old grasslands have completely gone. The desert of the Great Basin still remains, but, due to human profligacy with soil resources, the fingers of the desert are spreading eastward. What has replaced the original cover? In the words of Stuart Chase, "on one-quarter of the continental United States are new fields, bare in the winter, green with crops in the summer. Adjacent to these tilled fields are pasture lands, unknown before, of an almost equal area. On some of the old arid grasslands irrigation ditches now run. Scattered about the continent are the black cluster of cities. Linking them run a million

miles and more of highways, railroads, the tracery of power lines and pipe lines underground." [1]

In 1940 the land area of the United States totaled 1,900,000,000 acres. More than 1,000,000,000 acres were in farms of all kinds, but of this only about one-third was really good land. And even this best land was diminishing in quantity as the forces of rain and wind, flood and storm daily washed and blew away additional top soil. Nature's destructive forces, aided and abetted by man's careless use of land, are estimated to have ruined 282,000,000 acres and damaged 775,000,000 acres more since the population of the United States by white men began. Little more than 60,000,000 acres of the land now in crops, it has been estimated by the Soil Conservation Service, can be considered safe from erosion.[2]

Erosion occurs because of: (1) the plowing of oversteep slopes; (2) the failure to rotate, or diversify crops; (3) plowing up and down hill against the natural contours of the land; (4) leaving fields bare after harvest instead of planting a grass or grain cover; (5) plowing up the short grasses of the Great Plains and sowing the land in wheat and other cereals. Havoc has been greatest in the cutover areas of the Great Lakes country, the Southern Piedmont (the backcountry of Virginia, the Carolinas, Georgia and Alabama) and the Great Plains.

The dust storms that swept across the western portion of the Great Plains (western Oklahoma, western Kansas, eastern Colorado, the Texas Panhandle) in 1934 and 1936 blew their debris as far east as Washington and New York. Wind erosion was the destructive agent here; and because the grasses of the Great Plains were cropped by cattle and sheep, and finally torn up altogether by steel plows, the natural cover of this region was destroyed. The dry winds that blew across the plains in 1934 carried off something like 9,000,000 acres of topsoil. As a result, the "Dust Bowl" is a familiar name to Americans today.

Impoverished farmers have been the result of this waste; and destruction of land resources has been followed by a kind of human erosion—showing itself in low standards of living, high morbidity rates, illiteracy, shiftlessness. According to the National Resources Board, there were, in 1934, fully a half-million farm families (cultivating 75,000,000 acres) operating on a completely submarginal plane from which rescue was out of the ques-

[1] Stuart Chase, *Rich Land, Poor Land*, McGraw-Hill, 1936, p. 35. The quotation is slightly abridged.

[2] J. Frederick Dewhurst and associates, *America's Needs and Resources*, Twentieth Century Fund, New York, 1947, p. 431.

tion. Their retirement from agriculture and the return of their lands to forest and grass were the only solutions.

There is also a national danger—not immediate, of course, but nevertheless real—as a result of these practices. Secretary of Agriculture Wallace properly declared in 1939 that the "wholesale sapping of our land resources" is a "serious threat to national security," and that "historically land decline has been an early symptom of national decadence—there is evidence, in fact, to indicate that great civilizations of the past have died of the *malady of land decay*." [1]

How is soil waste to be checked? Agronomists and conservationists have called attention to the necessity for using the following practices to control erosion and put a stop to disastrous floods and dust storms:

1. *Return of the natural cover.* In the Great Plains and in the Piedmont, notably, where wind and water erosion have done the greatest damage, it is necessary to restore the original grasses and the forests. Particularly in all regions where slopes are too steep, cultivation must cease and the areas must be planted in trees or in grass and held as permanent pasture.

2. *Crop rotation.* Where single cropping has sapped the mineral riches from the soil, restoration can be achieved by systematic crop rotation with the inclusion of legumes and grasses in the series. Green manure crops (the plowing back into the soil of standing small grains, grasses and legumes) is part of this technique.

3. *Terracing.* On slopes, it is important to build turf ridges, channels, and protected outlets along the contour lines in order to create basins for catching the rain water. Terracing serves two purposes: it holds such water as the soil needs; and it makes possible proper drainage of the excess without accompanying soil losses.

4. *Contour tillage.* Instead of planting crops in parallel rows up and down the slopes of hills, planting should follow the contour lines around the hill.

5. *Strip cropping.* Farmers should be encouraged to grow alternating strips of erosion resisting crops.

THE CONSERVATION PROGRAM

Effective efforts to save the land, which must be carried out on a large scale, require skillful leadership as well as adequate financing. The conser-

[1] Quoted by Carl T. Schmidt, *American Farmers in the World Crisis*, Oxford University Press, 1941, p. 243.

vation movement won its first successes during Theodore Roosevelt's second administration when a National Conservation Commission was set up to inventory American resources. As the result of this commission's work, the first steps were taken by legislation which withdrew large tracts of timber land from the public domain so as to protect the headwaters of navigable streams. Public policy turned more and more in the direction of setting aside sources of power and minerals so as to protect them against wasteful and destructive exploitation.

The New Deal carried this activity much further, securing new legislation and far greater funds than ever before to support this conservation activity. Although much of the New Deal's work in this area was prompted by a desire to achieve other objectives as well, the results attained were of the utmost direct value. Thus the Soil Conservation and Domestic Allotment Act of 1936 aimed primarily to secure curtailment of farm production, but its benefit payments were made initially dependent upon farmers' adoption of such conservation practices as substitution of soil-building for soil-destroying crops, contour plowing, and terracing. The Civilian Conservation Corps, originally set up to provide work for unemployed young men, did much valuable work terracing large areas and planting shelter belts of trees to protect thousands of acres. Submarginal land was bought and put out of cultivation. The Soil Conservation Service made a comprehensive survey of the nation's soil resources and began the job of convincing every farmer that it was to his interest to guard the earth; at the same time the Service, through its demonstration areas, helped educate large numbers of farmers in the best techniques for safeguarding their land.

These activities, which reached their peak during the years 1936-40, helped prepare our agricultural land for the great test of the war. During 1941-45 our farms were called upon, and gave, record totals of food and raw materials. Much of this wartime production required the planting and replanting year after year of fertility-destroying crops, such as corn, cotton, wheat, and tobacco. In the postwar period, therefore, the urgency for soil conservation work is greater than ever, both to make up for the war losses of soil fertility and to protect the land against further encroachments by the elements.

ENERGY AND ECONOMIC LIFE

All activity requires energy. For that reason, the economic development of a civilization is closely linked with the amount and availability of power it knows how to utilize. Both requirements are essential; gasoline is useless

for transportation where men do not know how to make internal combustion engines, and every motorist is well aware that, without gasoline, the best automobile will take him nowhere. For most of its existence, the United States has been so fortunate as to possess in abundance both the technical knowledge and the natural wealth to produce enormous quantities of energy. To mention two especially important sources of power: each year there come from this country's deposits more than 60 per cent of all the petroleum produced in the world and 30 per cent of all the coal.

Power and the Industrial Revolution. In the last century and a half, Western economic life has been transformed by revolutionary discoveries and inventions centering primarily about new sources of power and more efficient means of utilizing old sources. Since this transformation is treated in some detail in Chapter 5, it is sketched here in only its broadest terms.

The first great advance was the steam engine, using coal. This made possible swift transportation over land and sea, and helped drive the machines whose development brought about the modern factory system. Within the last half century there have been additional basic discoveries. Led by Thomas A. Edison, numerous inventors have developed many new uses for electricity and made possible its transmission over long distances. As a result, electrical energy can be brought to where it is needed. This greatly expanded water power's area of usefulness. In earlier times, only those users of power that were located directly on the banks of rivers—as were the early New England textile factories—could utilize energy from falling water. Today, giant hydroelectric plants turn water energy into electric power transmitted by wires over large areas. Energy from coal is also transported in this manner, after first being turned into steam power and then into electricity. From both these sources comes the electric current that illuminates our homes and workshops, turns factory wheels, and annihilates distance by permitting us to communicate with others far away by telephone, telegraph, and radio.

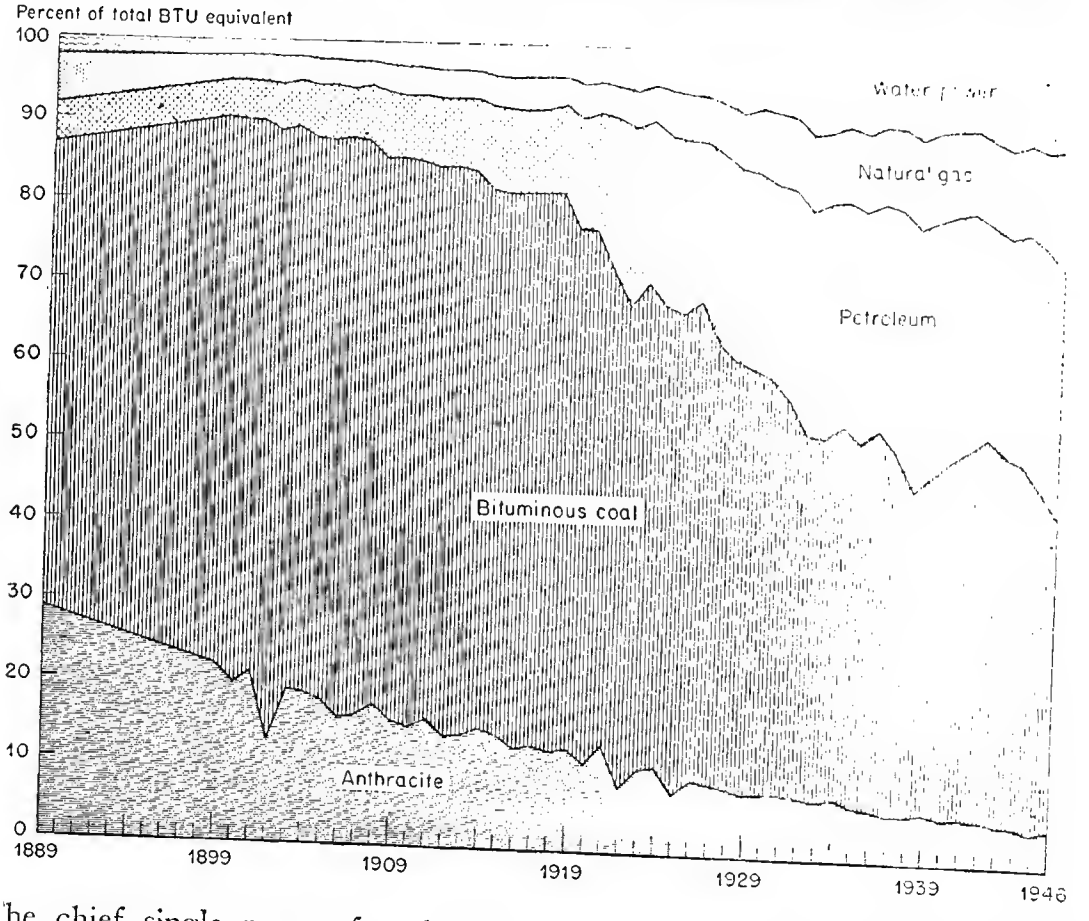
Exclusive of man power and work animals the chief sources of energy today are coal, petroleum, natural gas, and water power.[1]

In the future, atomic energy may become a major energy source, but many problems must be solved first. Wood, work animals, and wind produce negligible amounts of energy in comparison with the total power generated annually in this country and may be disregarded here. The relative impor-

[1] These natural resources have other important uses besides that of providing energy. Petroleum, for instance, gives us the lubricating oil without which machinery could never operate. In this chapter, however, the energy uses of these resources will be stressed.

tance of coal, oil, and water has varied considerably with the passage time (Fig. 2). In 1899, coal produced 90 per cent of all energy from th sources, while nearly half a century later, in 1945, it produced only 47 | cent. The same period saw petroleum and natural gas rise from 8 per c to 31 per cent, while water power rose from 2 to 12 per cent of the tot

Figure 2 **THE ENERGY SUPPLY, RELATIVE CONTRIBUTIONS OF INDIVIDUAL SOURCES, 1889-1946**



he chief single reason for these sharp changes lay in the tremendous owth in the number of gasoline-driven vehicles of all kinds during this eriod.[1]

In 1935 the total mechanical power available in this country was about 200,000,000 horsepower. Gasoline-powered land and air vehicles were pable of generating about 80 per cent of this total, coal-burning locomo-

[1] Both Fig. 2 and the percentages quoted in the text assume an unchanging fuel .T.U.) equivalent in computing the energy derived from water power. Consequently ey do not reflect increased efficiency in fuel utilization. Figures which take account this increased efficiency are useful for some purposes; they show a smaller increase the share of the energy supply furnished by water power.

tives about 7 per cent, and electric central stations and industrial power plants together about 5 per cent. Stating these figures as percentages of a single giant total tends to obscure the immense amount of power available from each of these classifications. The last group, for instance, which provides almost all the electricity used in our homes, workshops, and communications systems, had at its disposal about 65,000,000 horsepower, thus exceeding the combined electric generating capacities of Germany, France, Great Britain, Canada, and Soviet Russia.

Heat and power from coal. Despite its losses to competitive energy sources in the last few decades, coal still holds first place in our power economy. Two principal kinds are produced: the soft bituminous and the hard anthracite. In 1939 the United States produced about 400,000,000 net tons of bituminous. About 70 per cent of this annual production usually comes from the four states of West Virginia, Pennsylvania, Illinois, and Kentucky. The largest single source is the Appalachian field, of 70,000 square miles, which extends in a general southwesterly direction from the western end of Pennsylvania, through Ohio, West Virginia, eastern Kentucky, Tennessee, and northern Alabama. Anthracite coal, of which we mined about 51,000,000 net tons in 1939, is produced in this country almost exclusively in an area of 500 square miles in eastern Pennsylvania.

In regions where coal is abundant, electric-generating stations use it as a fuel. This once meant that these stations had to be located rather close to mines in order to minimize their coal transportation costs. More recently, however, the efficiency of coal utilization has increased tremendously, thus sharply decreasing the burden of coal transportation cost per unit of electricity produced. As a result, it is now more economical to locate generating stations near centers of electricity consumption, thus minimizing the investment necessary for building transmission lines, while increasing the distance over which the coal has to be transported. Technological progress, therefore, by altering the relative importance of different costs, has made electric-power generation less land-oriented and more market-oriented. Some new technological possibilities in the use of coal to generate electricity will be discussed in Chapter 5.

Of all American industries, the coal industry made one of the most remarkable recoveries during World War II. During the 1930's bituminous and anthracite mining were depressed, with prices low relative to costs, and output declining. To maintain prices and stabilize production, the federal government, acting first through the National Recovery Administration and then through the Bituminous Coal Division of the Department of Interior, restricted competition and output in this industry.

The urgent needs for coal during the war changed the industry's outlook completely. Bituminous coal production in 1944 reached a high of more than 600,000,000 tons, as against only about 400,000,000 tons in 1939, a rise of more than 50 per cent. During the war and immediate postwar period the chief coal problem appeared to be a scarcity of fuel to meet the swollen demands of a full-employment domestic economy plus the needs of devastated countries in Europe and Asia.

The United States does not face, for many generations, any danger of coal depletion. With current efficiency in utilization and the current volume of consumption, our supplies have been variously estimated to be sufficient for from two thousand to four thousand years. Put otherwise, of the coal in the ground when Columbus arrived, only about 1 per cent has so far been removed. But this should not make us indifferent to the question of coal conservation. The problem of how to use a resource wisely involves postponing the point at which costs of production begin to rise, not merely avoiding exhaustion of deposits. Our best coal fields are being worked intensively, and some of the formerly most productive ones have already been exhausted. The Pennsylvania and West Virginia fields, it is estimated, will probably last another hundred years, but their exploitation will encounter increasing costs much sooner than that. Once these high-grade reserves are exhausted, we can turn to the great quantity of low-grade coal deposits, but these cannot be worked profitably until prices mount considerably, or until technology advances beyond its present state. When and if it comes, sharply increased coal cost will seriously affect the Pittsburgh area whose great steel industry has been built up on the basis of abundant cheap fuel supplies. The situation is far from alarming at present. It does call, however, for the development of methods that will advance our efficiency in utilizing coal. Also needed is more careful mining, to stop the enormous waste that occurs through coal being left in the ground to support the roof of the workings.

PETROLEUM'S RISE AS A SOURCE OF POWER

It is less than a hundred years since the first oil well was drilled at Titusville, Pennsylvania, but in that time this "liquid gold" has risen to first place in annual value among all minerals produced in the United States. Powering millions of motor cars and machines daily, petroleum occupies a vital place among America's resources.

The United States produced about 1,700,000,000 barrels of petroleum in 1945, about a fourfold increase over the 1920 output. More than half of this came from Texas and California, while Oklahoma, Illinois, and Louisiana

supplied another 25 per cent. About two-fifths of this supply, by volume, took the final form of gasoline, while fuel oil, used in furnaces, Diesel engines, and the like, was the second most important product.

In its chief use, of course, petroleum is one of the most conspicuously market-oriented commodities in the country; thousands of gasoline stations dot our highways, dispensing the motive power for millions of motor vehicles. This has been made possible in large part by the use of pipe lines to transport oil from field to refinery. Without this low-cost means of shipment for petroleum and its products, it is unlikely that individualized transportation for millions of people would have been possible. Industries requiring large quantities of petroleum or its products for power or other uses have not, in general, been forced to consider proximity to oil fields as a major factor in deciding their location.

The production of petroleum—in which many small and large producers play a role—has long been marked by much chaos and waste, with harmful consequences for the national interest in this basic natural resource. Oil occurs in large underground pools. When a well penetrates this pool, the oil shoots up, driven by the powerful natural gas pressure in the subterranean reservoir. For greatest economy and efficiency, each pool should be treated as a unit and tapped by a small number of suitably located wells. This is how production is handled on oil land owned by the federal government.

Not so on most private holdings. When a prospector strikes oil, a geyser erupts into the air, telling the tale to owners of surrounding property. They immediately begin to dig wells in the hope of tapping the same reservoir. Those who are successful then engage in a day and night race to get as much oil as possible before the pool is exhausted. Should anyone stop his production, he would merely permit his neighbors to benefit. The result is almost invariably wasteful investment in many unnecessary wells and depletion of the supply in minimum time regardless of market conditions. As a consequence, producers have sometimes received what seemed to them ruinously low returns. Each well permits the escape of natural gas, a valuable energy and fuel resource in itself. The frantic haste, competition, and speculation dominating such oil frenzies lead to immense wastes in every direction, to the detriment of the community's interests and sometimes, too, to the ruin of the individuals concerned.

A strong demand arose for state action to control competition in the interest of producers, and also to reduce the waste of resources which had been so frequent. Beginning with Oklahoma in 1928, most of the chief oil-producing states have passed "proration" laws, which permit the allocation

of production quotas to individual producers. At times in the 1930's when oil prices were very low, complete suspension of production was ordered; use of the National Guard was sometimes required to enforce such decrees. Several states have entered into an interstate compact to secure co-operation in the application of these proration laws. Other laws were more directly concerned with conservation: some states penalized the waste of gas and enforced a minimum spacing for wells.

American petroleum reserves were drained at an unprecedented rate during World War II. Average production annually during 1941-45 was at a rate roughly 50 per cent higher than during the 1930's. Total production during the five war years was roughly 7,700,000,000 barrels, or about 40 per cent of all known oil reserves in this country as of January 1, 1940. American victory could never have been achieved without this abundance of petroleum to drive and lubricate the ships, tanks, planes, jeeps, and other mechanical equipment of the army and navy.

Known oil reserves in the United States on January 1, 1946, totaled 0,800,000,000 barrels, enough for about twelve years' production at the 945 rate of output. From this and similar facts many people have drawn he conclusion that our oil reserves are near exhaustion. This is not neces- arily true for there is no doubt but that additional oil discoveries will be nade in the continental area of the United States. Nevertheless it is clear nat this country cannot expect to go on indefinitely extracting petroleum om the earth in the same huge quantities as during the war. Each year the ea of the United States still unexplored for petroleum grows smaller, and becomes increasingly more difficult and expensive to find new wells. If mand remains high, as during the first years following the end of hostili- es, the price of petroleum will continue to rise and the search for oil will ntinue, despite its growing difficulty and cost. When, as, and if our large troleum sources are exhausted, this country will have the choice of relying on imports from abroad or creating a huge industry engaged in extract- g oil from shale and coal. The use of alcohol as a motor fuel, as well as e use of hard fuel for motor vehicles, may also grow.

To assure future adequacy of American oil supplies, despite progressive ainage of domestic resources, American petroleum firms have branched t to many parts of the world, particularly Central and South America and e Near East. American interest in foreign oil has sometimes been assailed imperialism, with the implication that the companies engaged in this ac- ity were doing something wrong. Should undeveloped resources in back- rd countries remain untouched? If so, the world would certainly be orer. Probably, if private firms did not take the initiative, the government

would feel compelled to do so, much as the government of the U.S.S.R. has sought oil concessions in Iran and elsewhere. To the extent that American firms have brought the advantages of modern technology, sanitation, and medicine to the foreign areas they have entered, the dwellers of these regions, whether in Venezuela or Saudi Arabia, have also gained.

ENERGY FROM WATER

Water power is the last of the three great energy sources we shall consider. In many ways it is the pleasantest tale of all. For centuries now, in every part of the world, man-made wheels have trapped the energy of falling water, thus securing power for productive human activity. And since, as we have noted, water power is virtually an inexhaustible resource, its utilization for production has not resulted in the depletion and waste that have characterized the exploitation of much of our other natural wealth.

In early 1939, the water-power energy producing capacity in this country was about 18,000,000 horsepower. California, New York, Washington, Alabama, the Carolinas, Maine, Georgia, and Pennsylvania together had about half this capacity. In terms of regions, the most important water-power areas are the Niagara Falls development in New York, the Columbia River Basin in the Northwest, and the Tennessee Valley in the Southeast.

It was the development of a practical method of transmitting water-power energy across great distances, in the form of electricity carried over wires, that made the American people fully appreciate the importance of their water-power resources. Once this was accomplished, water power began to displace coal. In the last two decades, however, the two energy sources seem almost to have reached a stable equilibrium in relation to each other. Between 1920 and 1938, for instance, the proportion of electric power produced by hydroelectric plants increased only from 36.8 per cent to 38.4 per cent. This proportion will probably increase somewhat in the next few years as more energy is produced at Bonneville, at Grand Coulee, in the Tennessee Valley, and at other public water-power projects. It is doubtful, however, that coal will lose its dominant position, since its efficiency of utilization has increased greatly in recent years.

The general cost factors that are involved can be stated briefly. Electric-power production from a water source requires a very large investment in land, dams, and equipment. The fixed investment tends to exceed that required by a steam plant. Once established, however, a dam needs no fuel and but a small labor force, while a steam plant requires a great deal of coal and a considerable number of workers. Hence there is involved a bal-

ancing up of interest, depreciation, taxes, and other carrying charges on a large hydroelectric plant investment on the one hand, against similar carrying charges on a small steam-generating-plant investment plus recurring operating costs on the other.

On this basis alone, water power might easily triumph over steam, except for several geographical and technical factors. First are the recent improvements in coal utilization which have cut fuel cost substantially. Second, electric power cannot be transmitted economically more than about three hundred miles and therefore its transmission is impracticable beyond such a radius from a water-power source. Most of the remaining potential water-power sources in this country are located in areas quite distant from centers of population and industry. Third, hydro facilities often must risk seasonal shortages of water, and therefore need to be supplemented by steam capacity. All these factors promise continued dominance for coal while its price remains at present levels, and until improvements in transmission methods have been developed. But water power and steam are not necessarily competitive. Some of the most efficient electric generating plants in this country use the two to complement each other.

Some industries require so much power for their operation that they must be located at or very close to water-power sites. Certain phases of the work with atomic energy, the electrolytic production of virgin aluminum, and the manufacture of fertilizers, are examples of such industries. It is no accident that the Oak Ridge center for atomic energy research and manufacture is located in the area of the Tennessee Valley Authority where an abundance of cheap hydroelectric power is available. Similarly much of the new aluminum-producing units built during World War II were located in the Columbia River area near Bonneville Dam.

Much of the hydroelectric power that is used in this country is distributed by giant integrated systems, controlled either by utility holding companies or by public agencies. The private self-contained systems often serve groups of states, and their wires make a network over the countryside, ignoring state lines and requiring federal regulation. A public water-power enterprise is usually but part of a unified plan for optimum development of land and water resources in a particular region, with attention being given also to irrigation, flood control, navigability, soil erosion, and other nonpower considerations. Conflicting claims have been made by both sides as regards the question of whether public or private power is more desirable, but consideration of this question must be postponed to a later section. We may note, however, the role of water power in the Tennessee Valley Authority's plans for revamping the economy of the Southeast, and the similar

projects being executed at Bonneville and Grand Coulee to facilitate development of the rich resources of the Pacific Northwest.

With an actual capacity of 18,000,000 horsepower, compared to a potential supply of perhaps 80,000,000 horsepower, it is obvious that water-power utilization can still go a long way. But its progress will depend on more than mere availability. Future trends in the growth and distribution of America's population and industry will also be vital. Important, too, will be technical developments in the fields of electricity and hydrodynamics. The rate of depletion of our other power resources will play an important role since it will affect cost and hence the market for the various resources. As a reserve, of course, water power is invaluable and is one resource we can expect to hand down to future generations unimpaired by the use we have made of it.

Still another source of energy, the atom, with a potential which cannot yet be clearly estimated, will be discussed in the next chapter, which deals with technology.

AMERICA'S MINERAL WEALTH

As minerals were among the first natural resources used by man, archaeologists have found it convenient, in classifying the stages of civilization's development, to speak of the Bronze Age and the Iron Age. In the last century and a half, however, mineral resources have been employed on a scale far exceeding any ever known before. The revolutionary advances in technology have not only created tremendous demands for minerals that have been employed since the earliest days of civilized man, but have also found uses for many heretofore not employed at all. Our civilization today is powered by coal, oil, and water, but it is built of steel, copper, and aluminum. Steel trains and automobiles, running on steel rails or steel-reinforced highways, connect cities largely built of steel; electricity flows along copper wires; aluminum planes wing through the sky. In short, our civilization today would be impossible without these useful products of our mines.

Mineral riches and deficiencies. As regards the question of supply, the United States is among the most fortunate nations on earth, having some quantities of almost all minerals, and abundant amounts of many of the most important ones. We have, however, practically no tin or nickel, while such materials as chromite, manganese, tungsten, and several others used as steel alloys are produced in such small quantities here—when moderate prices prevail—that we must depend upon foreign sources of supply. During World War II, our abundance of mineral resources was one of our greatest advan-

tages, while our few deficiencies were so important as to require great effort to overcome them. It is now national policy to acquire and store substantial quantities of vital materials against time of need.

Mineral deposits are highly localized, with the result that in some cases their supply approaches monopoly. But this monopoly is rarely an absolute one. Most of the minerals receive competition from other substances, particularly other minerals. Aluminum and steel, for instance, are particularly bitter rivals for many constructional uses with differences in technical qualities being set off against price considerations. Further, even where a particular mineral cannot be substituted for in a certain use, its producers often must face competition from those who reclaim supplies of the mineral from scrap or from slag piles. These so-called secondary supplies, together with potential imports from abroad in normal times, afford some protection against domestic producers who may wish to raise prices to exorbitant levels.

Iron and steel. The United States has always had large iron ore supplies, and much of our industrial structure has been built upon this fact. The Mesabi Range near Lake Superior produces more than half of our annual output, much of which goes to Gary and Pittsburgh by cheap water transportation. Alabama's mines supply Birmingham, while Pennsylvania—although it has long since lost its former pre-eminence—still produces a substantial amount of high-grade ore for the Pittsburgh district.

It has been estimated that more than four billion tons of iron ore remain in this country, and can be mined at costs not much above present levels. This, of course, is enough to last several generations at least and means that on this score we need have no very great worries. But waste and inefficiency cannot be condoned, especially since the rich Mesabi Range, opened as recently as 1893, already has lost over half of its highest-grade ores. At the 1943 rate of consumption, our best iron ore resources would be exhausted in eleven years.

The nonferrous metals. Copper, lead, and zinc come largely from the western states and usually occur in isolated localities. Until less than a decade ago, the United States was the world's largest producer of these metals with the result that depletion has progressed rapidly, and serious problems of supply are almost certain to be faced by this or the next generation. For example, Michigan and Montana, once low-cost producers of high-grade copper, now are very expensive producers. Today the deepest copper mines in the world, more than a mile in depth, are in Michigan and costs of extraction are very high. As a result, producers who once laughed at foreign competition have called for, and obtained, a protective tariff to

shield them against low-cost foreign producers. Our copper situation is comparatively good, however, when compared to that applying to lead or zinc; this is because of the newer, still low-cost, copper mines in Arizona and Utah. At the peak wartime rates of production, this country's commercial lead and zinc resources would have been exhausted in five years and our commercial copper supplies in twelve years.

It is fortunate that much of our copper, lead, and zinc come from scrap metal, thus reducing the drain on the primary sources. In 1946, scrap copper, lead, and zinc recovered amounted to approximately 40 per cent, 60 per cent, and 10 per cent of new supplies of each metal respectively.

Copper furnishes an excellent example of a resource whose users have been but little affected in choosing locations by the source of their raw material. Although nearly all American copper is produced west of the Mississippi, most of it is consumed on the Atlantic Coast, particularly in the Connecticut Valley, where, in colonial days, American copper mining began. As a result, copper smelters too are located in the East and copper is sold at a given price plus freight from New York to the purchaser. In similar fashion, zinc has been sold for many years with East St. Louis, Illinois, as basing point, although much of the production is hundreds of miles away.

Most bauxite, the main source of aluminum, used in this country comes from Dutch Guiana and other foreign sources. The largest domestic supplies of this ore are found in Arkansas. High and medium grade reserves are estimated at 11,500,000 tons, enough for only two to three years at peak 1943 utilization rates. The minerals that have been discussed here are those most essential to our economy. It is not possible to consider all the others in the limited space that is available, but in general we may reiterate the opening remark that in the case of most minerals, the United States has adequate supplies for the next several decades at least, although it does not possess sufficient quantities of such important ones as tin, manganese, and nickel.

THE NATION'S FOREST RESOURCES

Forests always have furnished a wealth of useful products. As a building material, even in this age of steel and plastics, lumber's values are many. Almost all rural homes in America are of frame construction. As a fuel, wood provided warmth and light for generations of Americans who had no coal or oil within easy reach. Millions of our people still employ it for heating. America's demand for reading matter calls for great quantities of paper annually, which in turn requires enormous amounts of wood pulp. In recent years chemists have evolved numerous alcohols, plastics, and other products

from the cellulose content of wood. Rosin and turpentine, the naval stores of tradition, are still very valuable and must be obtained from trees. Maple sugar is another forest product.

Forest land covers about 600,000,000 acres, one-third of our land area. Our richest lumber regions are in the states of California, Washington, Montana and Idaho, but the Southern states of Louisiana, Alabama, Mississippi, Texas, and Arkansas are also plentifully supplied. The economic importance of this resource can be appreciated from the fact that the annual value of lumber production alone is usually about $750,000,000, while in the forests, lumber mills, and woodworking industries, large numbers of people are employed.

Two chief varieties of timber are to be found in this country. The most important are the softwoods, such as the spruce, the pine, the fir, and the hemlock, which are widely used for construction purposes. These are to be found in both the East and the West and comprise about 85 per cent of our available saw timber. Hardwoods, such as the oak, the maple, and the poplar are confined largely to the Eastern forest areas.

Forest use and misuse. Forest use in this country does not provide one of the brighter chapters of American economic history. True, much of the nation's development was made possible by the vast stores of lumber which were so near at hand during most stages of the march across the continent. Yet those gains were made at an enormous cost involving much needless waste and destruction. To the pioneer farmer, the forest was an enemy to be destroyed by ax and fire so that land might be put in cultivation. Hence two hundred million acres of woodland were denuded of their trees, most of which were burned so that they served no useful purpose.

Similar waste has occurred in the exploitation of our lumber resources by the owners of forest land. First in New England, then in the Lake States of Michigan, Wisconsin, and Minnesota, then in the South, and today in the Northwest, the same process has been repeated. Each area has seen the ruthless destruction of giant forests that took centuries to mature. For a short period, this reckless exploitation produces a "boom" in which communities grow and prosper. But once the lumber is gone, the land is abandoned; and there are only ghost towns, poverty-stricken local governments, and advanced flood danger, to mark what has happened. Even today, only about one per cent of our privately owned forest land is being developed on a sustained-yield basis, whereby cutting is followed by replanting.

In the past our forest resources have been regarded as a "mine" to be depleted and then abandoned, rather than as a "crop" whose cultivation would produce an income year after year. One reason has been the greed of

men who bought timberland cheaply and wished to realize immediately on their investments without heed of the consequences. Then, too, there were pressing demands: pioneer farmers cried for cleared acres of fertile soil; railroads needed millions of wooden ties as foundation for their steel paths across the continent. In part, it was the lack of knowledge as to how a forest—with its long growth period and heavy annual costs for taxes, protection, and interest—could be developed so as to bring in an annual return. Finally there was the optimistic assurance of the inexhaustibility of our vast forest areas. Only recently have we realized the dangers of this mad depletion and we are just beginning to take steps to avoid these dangers.

Of our 630,000,000 acres of woodland, about 460,000,000 comprise commercial forest areas. About 40 per cent of this is still stocked with old or new timber of the best grade. Another 40 per cent is restocking fairly well or has reached cordwood size. The remainder is restocking poorly or not at all, its original clearing by fire or other means having ruined its prospective usefulness.

The decline of wood consumption. Per capita consumption of wood in this country reached a peak about 1906 and has declined since, while total consumption has not grown with our increasing population. For building purposes, plastics, metal alloys, and other recently developed materials have reduced the demand for wood. In part the responsibility for decreased lumber consumption must rest on the lumber industry, which has lagged behind other industries in efforts to improve its product and adapt it to satisfy consumer needs more adequately. In recent years the Forest Service has pushed intensive investigations which have revealed uses for wood and its products in many fields, particularly in the chemical industry. The outstanding advance in techniques of using wood during recent years has been the development of the Hetty process for turning the slash pine of the South into wood pulp for newsprint production. Already this fast growing industry is adding an important economic resource to some of the most depressed areas in the South. And especially encouraging are reports that in many parts of this area a tree is planted for every one cut down.

In 1934, the National Resources Committee estimated America's normal forest drain annually to be about 16,500,000,000 cubic feet, taking account of both human uses and losses from natural agents such as fire, insects, and disease. In the period 1925–29, our annual growth of timber amounted to little more than half this total, and replaced only about one-fifth the drain on fully grown saw timber. Since then, intensive educational efforts by the Forest Service and other agencies have resulted in more replanting of trees so that the disparity has been narrowed somewhat, but the annual drain still

ceeds the growth. If present trends continue in both production and
nption, this country faces the prospect of a timber shortage within
xt few decades. This will come when our virgin forests have been
ted, and before the second growth has reached maturity. The result
e higher prices and lower consumption. Perhaps the most effective
) reduce the present drain is to increase the efficiency of tree utiliza-
nce often more than half a tree's lumber even today is wasted or used
iomically.

he dominance of private forestry. Four-fifths of our commercial
land is privately owned, and it is this fraction which produces about
cent of our forest products annually. Public forest land, most of it
by the federal government, has been much less exploited and is today
our chief reservoirs of future timber supplies. Most of this public
much better protected against fire and other hazards than are private
reas, with corresponding differences in losses therefrom.

e flow of different forest products from original sources to final
ers furnishes us with several excellent examples of how the contend-
t, demand, and other factors affecting industrial location, resolve
ves. One extreme example is the production of newsprint paper.
od and paper production are in general located fairly close to timber
ter-power sources. The use of newsprint, however, is dispersed
out the country; there is a newspaper, magazine, or other form of
matter produced in almost every community of the United States.
e-making, on the other hand, is largely labor-oriented, and has re-
centered near the Great Lakes, where the skilled labor force neces-
furniture-making is principally located. It is a significant fact that
s north of the Ohio River and east of the Mississippi River use
e-half of the lumber consumed in this country annually, but them-
oduce only 10 per cent of the supply. Much of the rest comes fr-

CHAPTER FIVE

Our techniques of production

TECHNOLOGY AND SOCIAL CHANGE

Political and military events often blind us to the technical developments which may exert the most profound influence upon present-day society. The peacetime admiration of the wonders of science and industry is not as general as it formerly was, possibly because such an abundance of new and wonderful things has been produced that we have come to take advancing technology for granted. Even though powerful reactions of admiration, awe, horror, and fear were literally jerked from people by such spectacular wartime inventions as radar and the atomic bomb, it is generally true that peacetime marvels undreamed of a few years ago are today accepted as commonplace.

The student of the contemporary world cannot, however, disregard the impact of technology, of the union of science and industry, upon social and economic institutions. The basic factors in human behavior remain much as they always have been, but changes in technology during the last two centuries have given them new means of expression that have altered the course of history.

Technology was defined in Chapter 2 as "industrial techniques and methods." It sometimes is called "the state of the industrial arts." It is a category of productive resources having a peculiar dynamism of its own. This dynamism requires some explanation and illustration so that the singular relations of technology to our social environment may be clear. The modern factory system would seem to have followed as a consequence of the British invention of certain basic machines, such as the spinning jenny and the mechanical loom. But other factors also were involved. Thus the development of profitable new markets in Asia and America created an urgent

ıcentive to improve methods of producing goods; at the same time, the roduction of goods in greater quantities was stimulating the search for ew and larger markets. The classic question of the hen and the egg, with numerable ramifications, arises when one tries to unravel causative fac- ırs in history. Technology does not flourish in an isolated test tube, and e subject of this chapter is but one of many interreacting social forces. knowledge of the changing relations between capital, labor, government, d other features of the economic pattern will throw the trends of tech- logy into clearer relief, just as the latter will help us to an understanding how these other features of the pattern have developed.

Modern technology has, of course, been one of the most important ːtors making for social change in recent history. An appeal to one's own mory is all that is needed to confirm this statement. The moving picture l the phonograph, for example, are relatively recent inventions. Yet all us have witnessed the inroads made by the radio into the exclusive terri- y of the moving picture and the talking machine, just as they, not many ırs earlier, began to crowd out reading and parlor games. Home enter- ıment patterns are again in process of change with the coming of televi- ı. A single generation back, family excursions were limited to those that ld be made in the horse carriage, trolley car, or train. Today the auto- ɔile has made it possible to extend the range of travel enormously, so thirty or forty miles is a reasonable distance to go for a picnic, and dreds of miles for a vacation. Some people have even greater travel pos- ities in their private airplanes. These two examples, entertainment and el, have more than personal applications. They have wrought deeper, ɔugh less apparent, changes upon society through their effect in accel- ng the melting-pot process, in breaking down sectional barriers, and in ːing (perhaps unfortunately) more uniform national, and even interna- ıl, standards of taste.

INOLOGICAL PROGRESS: BLESSING OR CURSE?

Advances in technology are not unmixed blessings, and the changes h they bring in their wake involve difficult and far-reaching problems ljustment. Particularly since the development of the atomic bomb, ːists are beginning to realize their responsibilities in shaping the world. ; with scientists, statesmen and businessmen are finding themselves ısingly concerned with the problems involved in securing a degree of ty in a changing system. Characteristic of the spirit of this era is the hat stability in the economy as a whole typically is sought through

some kind and degree of control in the public interest rather than through a crystallization of present—or a reversion to previous—methods. During the economic crisis of the 1930's, some people demanded a return to the ways of the past, and others seriously proposed that a moratorium be declared upon all technological advancement until stability could be secured. Much as people in general might prefer to heed such demands, they cannot. One result of technology has been to destroy that implicit faith in the wisdom of the past, characteristic of other ages and cultures; an appeal to the authority of our ancestors does not command the respect it did in, say, the Middle Ages. Intensifying this condition is the fact that the evolution of technology is a dynamic process, driven constantly by a variety of causes: the search for profit, industrial needs for new materials and methods, the exigencies of military security, and even the advancement of knowledge for its own sake.

THE EVOLUTION OF PRODUCTIVE TECHNIQUES

One reason modern technology raises such difficult problems is the speed with which it is developing. Most industrial practices at the close of the eighteenth century had taken shape slowly over hundreds of years, and had been hallowed by generations of use. The forms of power available had been known for many centuries, and their uses had not altered fundamentally. The basic techniques for smelting and purifying ores, for making bronze, brass, and steel, were known to the ancients. Tools had changed only in detail during the centuries. The industrial arts were not a strongly dynamic force for change in society.

Production depended essentially upon the industry of individual workers. Machines were of a crude sort, and neither powerful nor precise. Power was limited to that which could be supplied by human or animal muscles, the water wheel or the windmill; and the materials of which the machines were made would permit neither high speeds and stresses, nor refined and precise matching of interlocking parts and bearing surfaces. The chief use of machines was to supply more power at a given point than could conveniently be provided by the unaided human hand and arm, as for example, in grinding mills and water pumps. Skill in workmanship rested primarily with the worker, and little use was made of mechanical devices to improve the quality or uniformity of the product. No large amounts of capital were tied up in productive processes, but artisans had to undergo long and arduous periods of apprenticeship to acquire the dexterity of hand and eye and the wisdom required to produce works of art; and each product in that

age necessarily was a work of art. No two pieces, even those produced in the same shop by the same workman, were exactly alike. Indeed, far from striving for uniformity of product, good workers often consciously sought to make each piece they turned out different from any other piece. Generally speaking, workshops were family enterprises, and tools were simple and inexpensive. This was the state of industrial affairs when, in 1765, Watt devised a steam engine that could be used to operate machines.

The spinning jenny (1767) and the mechanical loom (1786) were the culmination of a series of attempts to improve spinning and weaving to meet the demands of England's growing markets. They can be considered as early links in a chain of events which had far-reaching results, both industrially and socially. Earlier improvements in the loom, notably the fly shuttle, increased the output of the hand loom four or five fold, and made it unnecessary for each weaver to have one or more assistants. The generations-old balance between spinning and weaving was upset by the increased productivity of the weavers, and thread became relatively scarce. But, with a spinning jenny, one worker could care for eight spindles instead of two, and the situation became unbalanced in the other direction. The pull of technological advancement, strongly reinforced by the demand of expanding markets, finally brought forth the mechanical power loom, once again reversing the relationship. This in turn called for the application of power to the spinning jenny, so that one worker could supervise the operation of eighty spindles.

EFFECTS OF THE NEW TECHNIQUES

These developments were startling in the suddenness of their impact upon the existing social structure and system of production. Socially, they played an important part in the final breakdown of the European feudal system and the establishment of modern industrial society. Individual proprietors, who could easily afford to own their own spindles and hand looms and to operate a small shop—usually in their own cottages with the help of their families—could not compete with the heightened productivity and lowered production costs of the new machines. Nor could they, in most cases, afford to buy the expensive new machines. They were forced to leave their shops and to work in factories belonging to those who had enough capital to purchase machines. Furthermore, the markets did not expand as rapidly as the productivity of the machines increased, and each new development forced numbers of workers out of employment and cost those who retained their jobs the benefits of their skills. Inventors and mill owners were

frequently the victims of violence at the hands of workers whose jobs were threatened by the new inventions, but strong social resistance did not stop the stream of improvements. The British hand-loom weavers were merely the most famous of those groups of workers whose skill lost its value as the Industrial Revolution progressed.

The early textile machinery fostered other far-reaching and equally significant technical changes. A steam turbine, as a scientific curiosity, was known to Hero in 120 B.C., and the revived interest in scientific matters in the eighteenth century led several scientists and inventors to experiment with steam devices. These probably would have remained laboratory toys had not the invention of industrial machines that required mechanical power added an economic incentive to spur the development. Although steam power was first used commercially to pump water from British coal mines, it owed its continued development to the increased use of machines in factories.

The increased use of machines, of course, also brought about the machine-tool industry. Until the close of the eighteenth century, the hammer and cold chisel, together with the simple turning lathe and drill press, constituted the entire equipment used to build other machinery. But machines involving the simultaneous movement of eighty spindles could not be crudely constructed, and this era saw the development of machinery for making plane surfaces, and of devices to hold the work firmly so that the operation of the machine could be more precise.

The mechanical revolution brought with it yet another development worthy of note, the new technology of materials. The refining of ores and the making of iron, steel, brass, and bronze were ancient arts discovered largely by accident. Improvements in the Middle Ages did not radically depart from the early principles. This is not to say that the quality of the product was always poor, for the best of the steels developed for swords and armor rivaled the best that can be produced today. The deficiencies lay in the lack of certainty as to the results which even the same smelter would get from his furnaces, the small quantities of metals that could be produced, and the tremendous amount of skill and experience required to make good metal. Most metals were of poor and uneven quality.

As with the textile industry, progress in the technology of metals was stimulated by its own advances. Early improvements in steel-making led to such great increases of production that the forests of England were in grave danger of being completely denuded to supply the charcoal necessary for the furnaces. To protect the forests, the government was forced to stop completely the expansion of the steel industry. But even at that

arly time the onward surge of technology was irresistible; in 1709 coke vas substituted for wood as a fuel in smelting and refining. Thus the steel ıdustry already existed when the new machines and steam engines were ıvented, and it helped to make possible their commercial development. lachines required metal of uniform quality and of greater strength than as common at the time, and steam engines complicated the metallurgical roblem because metals are neither as strong nor as hard when they are hot. arly engineers realized that greater economies of operation could be ob- ined from steam engines operating with high steam pressures, but pres- res above thirty pounds per square inch were not practicable until ethods of making steel in large quantities brought steel boiler plates thin the range of possibility. Boilers in operation today generate steam essures as high as two thousand pounds per square inch at temperatures ıging up to 1,050 degrees Fahrenheit. Much of our present material civili- ion is due to the Bessemer process of making low-grade steel, which s first used in 1856. Prior to its introduction, steel could be employed y for small machine parts and structures; it was made in such small ches that quantity consumption for steel rails, for bridges, and for build- s would have been utterly impossible. Some idea of the changes wrought this process of steel-making is suggested by the fact that when steel rails e substituted for iron, the life of the rails was lengthened about twenty- r fold.

This completes our brief sketch of the evolution and historical effects nodern technology. The remainder of this chapter will be focused upon ent-day conditions. Its purposes will be: (1) to describe modern tech- gy as a category of peculiarly important productive resources; and (2) ıggest some of the social changes and economic problems that are closely ciated with it.

RCES OF PRODUCTIVE POWER

Power is energy employed to do work. Energy may be used for heat- ınd lighting as well as for power, and one kind of energy, electricity, s all three uses. We are here concerned with energy as it is used to turn vheels of machines and to carry forward such industrial processes as olysis, although its uses for heating and lighting are closely allied.

n any general discussion of energy a basic consideration is the sources which energy can be obtained. It is a law of nature that energy can ither created nor destroyed, but this law is somewhat modified in its ical application by an equally fundamental natural law, the second

law of thermodynamics. This states that in any energy system isolated from outside interference, a change in energy must be from a more available to a less available form. This means that energy which now exists with a high potential of usefulness, as for example, the energy stored in coal, must inevitably lose this potential when it is used. Although the time period required for all potentially useful energy to run down to such an extent that human existence will be impossible is so great that it is of only theoretical interest, the rate at which power is being used at the present time is such that the finding of new sources of high energy potential is becoming a pressing problem. The natural resources affected by this problem were discussed in Chapter 4. A brief summary will suffice, therefore, at this point.

The most important energy source for the earth is the sun. Some efforts, generally not successful from a commercial point of view, have been made to capture solar energy directly by using the sun's rays for heating. But by far the greatest source of solar energy is indirect; it results from the photosynthesis process, by which living organisms store up energy in available forms. Coal, oil, and wood are stores of this kind. The first two of these are the result of processes which occurred in geologic times, and once they are used up they cannot be replaced. Ironically enough, these two stores are the most convenient and concentrated yet discovered. Wood, which is replaceable, does not have nearly as concentrated energy content, and is therefore unsatisfactory for producing the intense and continuous heat required for many industrial processes. In addition, power is now being used at such a rate that to employ wood alone would rapidly destroy all of our forests. Fortunately, the known supplies of coal are sufficient to meet our energy requirements at the present rate of consumption for several thousand years. Oil fields are still being discovered but, on the basis of present known resources, we have no more than enough to supply this generation. To supplement coal, oil, and wood, nature operates a vast solar energy machine which provides water power. Wind has long been used as a source of energy, but its power is neither great nor dependable. Two other natural sources of energy, tides and volcanic heat, have been exploited, but thus far have not contributed greatly to the total world supply of power. Experiments are being made looking toward methods of deriving satisfactory fuels from agricultural products.

POWER GENERATION

Great strides have been made in methods of generating power since the start of the Industrial Revolution, when water wheels, windmills, and draft

nimals supplied all the power that was used. The first advance came with ıe use of steam engines for pumping water, both for domestic water sup- ly and to clear mines of seepage water. In 1760 a reciprocating steam ıgine was used for operating a blowing machine, and the era of steam ower was inaugurated. Improvements were made to increase the steam ıgine's efficiency, and it grew in size so that it could supply the power eds of individual factories by a system of shafts and pulleys. When, at e close of the nineteenth century, the electric dynamo was introduced, mands for greater power-generating units were created; electrical sys- ms became city-wide, and eventually nation-wide, instead of being limited a single factory. Reciprocating steam engines large enough for this pur- se would have been extremely unwieldy.[1]

The problem, however, did not become serious since this type of en- ıe was replaced by the steam turbine, which came into use almost at the ne time that the first dynamos were installed. The turbine has distinct ad- ıtages over the reciprocating engine: (1) it develops greater power with s size and weight; (2) its working mechanism is a simple rotating shaft, compared with the cumbersome and massive piston, connecting rod, and wheel; and (3) it is capable of much higher shaft speeds. This last fact made it possible to exploit the efficiencies inherent in the design of large ctrical generators.

As a result of this chain of developments, electrical power has been de generally available to industry. Electricity does not represent a new rce of power, but rather a new means of transforming and transmitting ver from its original source to its place of utilization. Its introduction not y fostered more efficient methods of utilizing steam; it has also helped change the water wheel to the steam turbine of the modern hydro- tric plant.

While these technological changes were yielding greater and greater unts of power, the years about the turn of the century saw also the practicable internal combustion engines. These met an entirely different l, that for relatively small yet highly mobile units of power supply. fact that the engines themselves, together with their fuel supply, were excessively massive made them the logical choice for self-propelled cles, and the automotive industry was born. Since the turn of the cen- , important improvements have been made in this type of engine. One of development has led to higher and higher compression ratios, which

[1] Even as late as 1876, the giant Corliss engine which attracted much attention as of the "wonders" of the Philadelphia Exposition was quite similar in principle to 's low-pressure reciprocating engine of more than a century earlier.

demand a greater and greater refinement of the gasoline used as fuel. At the same time, a different variety, the Diesel engine, using a relatively low grade of fuel oil, has been improved and brought into general use. One important economic consequence is that it helps to restore a balance that had been destroyed when the demands for high-grade gasoline created a surplus of lower-grade fuel oils in the distillation process. Recent developments in internal combustion engines include jet propulsion, now limited to military airplanes, and the gas turbine. Both of these promise more efficient operation with cheap fuel, but it is still too early to evaluate their importance.

ENERGY FROM ATOMIC FISSION

The extent to which atomic energy can be utilized commercially remains debatable. Experiments continue with a view to determining how this tremendous energy can be successfully transformed to usable forms, but the results are, of necessity, kept secret. For atomic energy to be generally useful, methods must be perfected to change the energy released by the nuclear reaction into electrical power. Present estimates seem to indicate that if the technical problems of transferring the heat from the nuclear reaction to a suitable fluid can be successfully surmounted, electric power from atomic sources can be produced at least cheaply enough to compete with coal in many regions of the earth.[1] The heat created would be too intense to use for steam generation, but engineers have already had experience with the use of mercury vapor in power plants, and the problem does not seem insurmountable. The cost of generating power, however, is but a fraction of the total cost of the electrical energy delivered to the consumer, and in view of the heavy fixed investments in present power-generating equipment, it is doubtful that atomic energy will replace coal in areas where the latter is plentiful and electrical generating capacity already nearly adequate. It is estimated that atomic energy plants, to be economical, will have to exceed 500,000 kilowatts in capacity; at current rates of power consumption, only fifteen or twenty cities in this country could use such a plant.

Despite these somewhat negative considerations, atomic energy may exert a significant influence upon the economic structure of the world. In-

[1] Recent estimates indicate that electricity generated from atomic power may cost between four and ten mills per kilowatt-hour, depending upon the size of the generating plant. This compares with the cost range of six to ten mills for electricity generated from coal and water in the United States at the beginning of 1947. In Argentina, where fuel is scarce, present generating costs are about sixteen to eighteen mills.

ustrial areas tend to some extent to cluster around coal and iron supplies, lthough, as shown in Chapter 2, there are notable deviations from this tend- ncy. Some industries which are not directly dependent upon these two raw ıaterials are forced to orient themselves toward these areas, because it is only ıere that power and other services and facilities are generally available.[1] tomic energy may reverse this process, so that many parts of the country hich are not necessarily backward industrially may be able to develop. At ıe same time, areas which now are highly developed because of their con- guous coal and iron deposits may suffer the loss of their superior positions. ıplications of this order cannot be limited to national considerations, and e use of atomic energy, if it is at all practicable, will inevitably alter the onomic pattern of the entire world.

ANSMISSION OF POWER

Changes in the form in which power is made available have been ac- mpanied by changes and improvements in the means by which it can be ›plied at its point of utilization. The most direct method is to have the ›tive power on the same shaft as the mechanism to be operated, with the lition, possibly, of some form of clutch to engage and disengage the ;ine as required. Because the machine must be directly aligned with the ;ine and the machine speed exactly coincides with that of the motor, this thod is seldom used except in small installations. The use of belts and rs makes it possible to locate the machine in any angular relation to the ine, to divide the initial power supply into smaller units so that many :hines may take power from the same engine, and to step the speeds up or vn by using different sizes of pulleys and gears. Energy losses are con- rable, however, and the machines must be located within a reasonable ance of the power plant. The old factories with their forests of belts e dark, dirty, and unsafe, and presented a considerable maintenance ›lem. All of these facts point up the great advantages which the intro- :ion of electric motors made available to the factory. Overhead belts ? removed to give greater light and air, the machines were entirely from any mechanical connection with an engine, and most smaller

[1] A change in this pattern has already begun with the development of aluminum, ı, as a metal competing with steel, can be independent of it in its refining processes. :e steel, it uses electricity instead of coal for its reduction, and coal in the form rbon is not a constituent part of the finished product. Aluminum plants, therefore, been located near cheap sources of hydroelectric power rather than close to the ional coal and iron centers.

factories could dispense with the operation of their own power plants and buy power from the utility companies more cheaply and with less trouble.

Although it is possible to use belt transmissions to supply power in any combination of angular relationships, in practice it is very difficult to do so, and most machines and shafts are laid out at right angles to each other. The electric motor has removed this restriction, and it is now possible to place the motor at any desired place on the machine. It also permits additional flexibility in design in that two or more motors can be used on the same machine, thus making it possible to have power at varying rates of speed at different points without the necessity of cumbersome gear trains. Most important of all, the electric motor gives greater freedom of control. A simple push button starts and stops it, and this control can be located with reference to the convenience of the operator rather than to the location of the motor. With the development of electrical switches actuated by beams of light, changes in temperature, weight, position, or the passage of time, fully automatic machinery became possible, and in many processes workers whose sole occupation was to start and stop machines and to transfer material were replaced by a single operator who controlled the whole process by a set of switches.

The widespread use of electrical power in industry was made possible by alternating current, which permits power companies to transmit their power at voltages as high as 287,000 to distribution points, and there to step it down to voltages that can safely be used in homes and factories.[1] The power lost in transmission lines is much less than that lost in belts, but when the distance is measured in miles instead of feet, practical limits are imposed upon the distances over which the electrical power can be transmitted. This fact makes it impracticable at the present time to locate power plants near coal supplies—which would eliminate the costly transportation of fuel—and renders many otherwise excellent sites for hydroelectric plants useless because they are too far from the places where electricity is needed.

DEVELOPMENT AND USE OF NEW MATERIALS

Modern materials greatly extend the possibilities of the designer in every field. For ages the materials available for mechanical and structural work consisted of metals, wood, and such building materials as stone, brick, and glass. Progress in the uses to which steel is put already has been mentioned.

[1] Experiments now in progress look toward power transmission at 360,000, and eventually at 500,000 volts.

.lloys such as nickel, chromium, and manganese have greatly increased its ardness and strength, have made it resistant to rust and corrosion, and have :tended the temperature range over which these qualities are maintained. ecent improvements in methods of casting steel have made it possible to ·oduce intricate objects of steel without the necessity of first casting it to ingots, then rolling it into shapes, and finally subjecting it to a long ıd expensive machining process.

The nonferrous metals. Similar progress can be recorded with nonferus metals. The production of pure copper, so useful for electrical power ınsmission, was made possible through the development of the electrolytic ocesses, and this method has increased the supply of other metals which ıerwise would be very expensive.

The most significant development in the field of metals lies in the introction of the lightweight metals, aluminum and magnesium, as fabricating terials. Among the most common of all metals, they have not been avail- e until recently because of the difficulty of releasing them from the com- ınds in which they are found in nature. Both required painstaking tech- al research before practical methods could be found for producing them, l both are economical only when produced on a large scale.

Aluminum in particular requires great quantities of electrical power its transformation into usable metal, and only large companies can pro- e the capital required to set up and operate the plants. This technical :or has an important bearing upon the tendency toward monopoly in : industry. World War II provided a great impetus to the production of ninum, and in 1946 it ranked second only to steel in volume of produc- :. It may in the future offer serious competition to steel as the leading ·icating metal, although at the present time it is used largely where steel, ıuse of its greater weight, would not be practicable. It has, indeed, ıed up entirely new fields for designers, and if its use is confined to e fields, it is possible that it will not offer any serious threat to the ent position of steel as the primary industrial metal.

Plastics and resins. Research has been invoked to provide a new and difıt line of materials, the plastics and resins. Natural resins, such as shellac, been used industrially for a long time. Synthetic resins used as bondınd impregnating materials increase the strength and usefulness of wood. ·egnation with resins is also extended to paper and textile products, reıg in tough, hard, and light materials which can easily be formed before harden into shapes difficult to duplicate in other ways.

Plastics are organic compounds not found in nature. They have two ıcteristics in common: at some stage in their manufacture they car

easily be cast or shaped, and they set in a more or less rigid condition. They are classified as thermosetting or thermoplastic, depending upon whether they set permanently when heated, or soften each time that heat is applied. These synthetic compounds have frequently been called tailor-made because chemists, through their knowledge of the structure of organic molecules, create them to satisfy a predetermined set of qualities. Light, tough, corrosion resistant, varicolored or dyed, easily formed into intricate shapes without machining, they are revolutionizing the design of household furnishings and industrial products. Their colors never wear off because they are a part of the material itself. Some plastics have a natural, smooth finish which resembles a high polish, even after hard wear. Transparent plastics are not brittle and are adaptable to many uses impossible with glass. Industrially, plastics are valuable because they can be used for electrical insulation, and for a variety of light shapes difficult to duplicate in metals. Extruded as fine threads, plastics rival natural fibers. Both wool and silk have been successfully duplicated with synthetic plastic fibers. Plastic bearings for light loads require only water as a lubricant.

In spite of these extraordinary properties, chemists have not yet made of plastics the "ideal" material. Taking the field of plastics as a whole, almost any desired physical property can be obtained, but the entire range of desirable properties does not appear to reside in a single type of plastic. Synthetic fibers, for example, although superior in some respects to the natural ones, are weaker when wet. The search to discover plastics with better physical properties, and capable of being manufactured out of cheaper materials, has resulted in a steady stream of new plastics entering the market. This condition has tended to make the industry extremely unstable, for a manufacturer who begins to turn out the latest plastic cannot be sure that a superior product is not already available in the laboratories. For this reason, the manufacture of plastics has tended to gravitate to the large, well-established chemical companies. Such companies can afford to absorb the losses that may result from rapid obsolescence and can maintain extensive research facilities to keep abreast of new developments.

The silicones. An entirely new family of substances, the silicones, were developed during the war years. Chemically, they are of interest because they form a link between organic and inorganic compounds, with silica substituted for part of the carbon atoms in the molecules. Industrially they are of value because they are extremely stable, and their physical properties do not vary greatly within wide ranges of temperature. The family of compounds includes low viscosity fluids, which may be used as lubricants, rubber-like substances, and hard materials similar to plastics. Machines with

ilicone insulation materials and using silicone lubricants can be run at much igher temperatures than is possible under ordinary conditions. Silicone lu-ricants not only do not lose their viscosity when heated, but they do not ongeal with decreases in temperature. Silicone rubbers are resistant to oil id gasoline, thus offering important advantages over both natural rubber id synthetic rubbers of other composition.

This account of relatively recent technological progress affecting ma-rials is by no means exhaustive; it is presented here as illustrative of new evelopments in this field and their implications.

OMMUNICATION AND TRANSPORTATION

Communication. The discovery of electricity made possible a whole w field of commercial activity—rapid communication. The first telegraph presented a fairly simple application of the principles of electromagnetism. much more complex problem was solved with the invention of the tele-one, and continuous progress has been made ever since to improve the ilities for telephonic communication. The first telephone circuit was car-d over a system of parallel wires. It would be physically impossible to ve the present number of subscribers with such a system because of the ze of wires that would result. Recent telephonic research has made it ssible to carry on many conversations simultaneously on the same set of res. The dial system has helped to reduce physical problems resulting from gested switchboards in metropolitan areas. The quality of long-distance phone service has been improved through the application of electronic earch.

A parallel development has resulted in teletype machines, which type ssages simultaneously at widely separated points, and telephoto machines ich transmit pictures by wire or radio. Research directed at such prob-s as these has helped clarify issues in other fields. In this country the re-ch organization of the telephone company has led in promoting knowl-e of speech and sound, of electronics, of radio, of the applications of istical theory, and of the properties of materials. Stemming from this arch have come many of the improvements in radio and television. The hastened the development of electronic devices which culminated in ar and loran, two devices which gave the Allies a decided advantage over Axis in navigation and in detecting and tracking enemy vessels, planes, projectiles.

Transportation. Transportation has been speeded up, and the service lered has in other ways been made superior, as the result of recent tech-

nical improvements. The railroad supplanted the barge canal and horse-drawn modes of transportation; perhaps its greatest early achievement in this country was to make possible the rapid growth of the West. After years of domination of the transportation field by the railroads, motor vehicles successfully proved themselves in World War I. Since that time the railroads have had increasing competition. The advent of the automobile, truck, and bus has greatly curtailed short-haul railroad traffic, except in areas where the density of population makes rapid-transit railways economically feasible. To a lesser extent trucks and buses have taken over some phases of long-distance transportation, offering competition through lower costs and more flexible schedules. Pipe lines have deprived railroads of much business transporting petroleum. The most recent keen competition has come from the airplane, which has challenged the railroad in the field of long-distance passenger traffic. The bulk transportation of nonperishable items for which there is no great haste in delivery, and the mass transportation of passengers can best be handled by the railroads. Yet the newer forms of transport offer advantages in speed, flexibility, and comfort that the railroads find hard to duplicate. One result of this new competition has been improvement of services offered by the railroads, and consequent increases in their costs. But to what extent railroads can make up for the superior speed of airplanes or the greater economy of motor vehicles remains to be seen.

Technological changes are effecting a still more subtle change in railroading. Traditionally, railroads and coal have been closely linked, both because coal forms one of the most important cargoes for the roads, and because locomotives have been major consumers of coal. Currently the trend in motive power is toward electric and Diesel locomotives, and the shift to oil as a fuel by other users is altering the pattern of coal shipments. Should the current tentative efforts of the coal industry at integration with the oil and gas business be successful, so that much coal comes to be transformed to gaseous or liquid fuels at the mouth of the mine, the railroads will have another difficult adjustment to make.

TECHNOLOGY IN AGRICULTURE

It is customary to speak of industry and agriculture as if they were two quite different kinds of occupations. In many respects this is true, yet as time progresses, the industrial techniques which have removed so many occupations from the home to the factory and, in so doing, completely altered the economic and social structure, are invading the field of agriculture and

re bringing about many changes. Farmers have long been thought of as unprogressive" and unfamiliar with modern techniques and processes. The ıme apparently irresistible impulse to seek greater economies which has ›rced the introduction of new techniques into industry works, although at somewhat slower rate, in agriculture. It already has made significant ıanges.

Farm processes are being mechanized. Not only has mechanical and ectrical power replaced the horse, but it has enabled the farmer to do any things previously impossible. Subsurface plowing, the curing of hay the barn, and the simultaneous planting and fertilizing of crops, only ghlight the kinds of changes which have enabled the farmer to extend his ›erations without hiring more help. But these advantages can be purchased ly by an extensive investment of capital, and the modern farmer must ve sums at his disposal almost as large as those needed by industrial sinesses. In some respects, these changes represent a transfer of work from : farm to the factories where the farmer's tools and implements are manu-:tured and his products processed for market. The farmer is linked more ›sely with industry and is less self-sufficient than he used to be.

As this trend continues, the tempo of farm life speeds up. Farming is :oming less a way of life and more a form of business. The farmer must alert to take advantage of the latest developments, and he must know *v* to manage his extensive mechanical equipment. He has learned to ap-ciate the value of research, as carried on by his state agricultural college, l he is often better informed than his opposite number in town on the st scientific developments. These developments are making it harder for :ndividual to get a start in farming, and the situation is rapidly becoming ıparable to that which obtains in industry, where both capital and tech-ıl information are necessary for the man who plans to start or to remain ›usiness.

The advent of mechanization has increased the size of farms, and de-sed the number of farms available. Thus the small farmer—especially the nt farmer—finds it harder to operate. Although the individual farmer characterizes agriculture, large-scale operations carried on by corpora-s have proved to be economical for some types of crops, and it is pos-that farms supplying bulk crops, such as cotton and wheat, and crops such food-processing industries as canneries and quick-freezing plants come to be operated principally by business corporations. The entry orporations into agriculture has resulted in extensive research to im-e the markets for agricultural goods, and successful attempts have been

made to manufacture such industrial products as fuel, alcohol, paints, and synthetic cloth from farm products.

TECHNOLOGY AS STANDARDIZATION

Standardization of methods and products. Early machines were not precision instruments. They were principally devices for holding material while the worker fashioned it with his hands or with a tool. Nevertheless, because they held the material more steadily than the hand could, products made with their use were more nearly uniform than those wrought by hand. As skill in building machines increased, other devices were introduced to hold the tools as well as the materials. Old turning lathes with a simple tool rest clearly illustrate this development. Using such a device, a careful workman could produce piece after piece with a remarkable degree of uniformity. Because of the difficulty in securing careful workers, not many attempts were made to produce uniform work on early machines. When, however, to these holding devices were added mechanisms for guiding the tool, almost any workman was able to produce unlimited quantities of practically identical pieces by the simple expedient of setting certain stops and levers and letting the machine do the work.

These changes had first been introduced not so much for the sake of uniformity in the product as for improvement in the workmanship of the individual pieces. Once this stage had been reached, the advantages to be gained from manufacturing large numbers of a uniform product became apparent. If, for example, many rifles for the army were to be manufactured, much expense could be saved if every stock were like every other stock, and every barrel like every other barrel. The rifle could then be assembled by putting together any stock and any barrel, rather than by carefully fitting these two parts for each individual rifle. Furthermore, if any part became worn or broken, it could easily be replaced with a standard part, thus obviating the necessity for having a new piece carefully fitted to replace the old one.

It was not until many years after the first development of machine tools that standardization became an accepted industrial practice. It was first used in manufacturing individual types of products, such as army rifles and revolvers, and was limited to the parts that went to make up those articles. Still greater economies could be gained by standardization of the articles that were used in assembling many products. Eventually, therefore, engineering societies, government agencies, and associations of manufacturers expanded these methods to include standardization of screw threads, gear teeth,

pipe fittings, qualities of materials, methods of drawing up specifications, and a great number of similar applications in all kinds of industrial processes. So important did this phase of modern industry become that the American Standards Association was formed to co-ordinate the work within this country. Before World War II it was a co-operating member of the International Federation of National Standardizing Associations. Immediately after the cessation of hostilities, steps were taken to revive international co-operation in standardization and within a short time the United Nations Standards Coordinating Committee was formed to carry on the work. Standardization, achieved as a by-product of early industrial techniques, has already spread far beyond the realms of industry, and its application has had both elevating and leveling effects on standards of living and on cultural standards.

Specialization. Specialization by trades has long been a feature of economic society. The butcher, the baker, the candlestick-maker have played an honorable and historic role in society. A modern development resulting from mechanization has been the growth of specialization by tasks. Machines are not as versatile as men; they induce specialization by their very nature. A locksmith could do all of the work of making a lock, from beating out the rough forging to assembling the finished product. A machine able to perform all of these tasks would cost so much that no lock manufacturer could afford to use it. Particular machines used in manufacturing such things as locks accomplish only one part in a series of processes. A punch press will only turn out rough parts that later must be finished on other machines.

Furthermore, each machine is a specialist in another sense. A punch press can produce only one kind of blank. It will turn out tumbler after tumbler, each identical with its predecessor, but to punch another size or shape of tumbler, trouble and expense must be incurred. It can be taken as axiomatic in machine design that the more intricate a machine, and the better it is designed to perform its specific function, the more difficult it is to adapt it for any purpose other than that for which it was intended. An ordinary lathe, which does work involving only the turning of material, can be used in many more ways than can the more complicated turret lathes designed to turn out automatically some intricate part.

The specialization induced by machines and by modern industrial processes has given rise to the problem of technological unemployment. When a person has trained to become a specialist, he finds himself unable to change easily to some other form of special work; if he is thrown out of employment, he has difficulty in finding work in any other line than that for which he is trained. Icemen, telegraphers, and streetcar conductors are

examples of specialists whose work is disappearing, never to return. While technological changes open up new fields for specialized work, the displaced specialists often—even usually—find that the skills they have acquired do not fit them for the new kinds of work.

Extensions of standardization. Industrial processes require regularity and organization. Machines and chemical and electrolytic processes work in accordance with definite time cycles, and the integration of the various dependent parts of a manufacturing process calls for detailed planning and scheduling of every part of the operation. Scientific management became an important part of American industry in the early years of the twentieth century because engineers began to realize that research, planning, and timing were as necessary to the factory as a whole as they were to the design and operation of an individual machine.

Partly as a result of the efforts of proponents of the scientific management movement, and partly as a consequence of the spread of industrial techniques and habits of thinking, most phases of social and economic life have undergone an increased degree of co-ordination, articulation, and synchronization. Procedures aiming at more rational methods of selling, of homemaking, of investing money, of running governmental organizations, are constantly being developed and revised. Industrial techniques have altered the cultural pattern. Printing presses have made literature, good and bad, available to everyone who can read, and modern color printing techniques have made good reproductions of great works of art familiar to every school child. The radio, phonograph, and moving picture have made music, drama, and education the property of the whole world instead of the cherished possession of the few. A recent series of radio broadcasts even proposed "standardized" community concerts to bring music to the masses.

SOME ECONOMIC CONSEQUENCES OF TECHNOLOGY

Although the present era is still considered a mechanical age, quite clearly more is involved than the ingenious use of mechanical devices. This chapter has described a variety of developments, not all of which are predominantly mechanical in nature. Power sources, electricity, chemical processes, the introduction of order and synthesis to industries formerly considered beyond the scope of such treatment, are not mechanical developments. All have common characteristics which first were brought clearly to light in the creation of machines in the early days of the Industrial Revolution; hence the common tendency to associate them with machinery. What is involved is a method of solving problems which has revolutionized both

industrial techniques and men's ways of thinking. A more appropriate, if more cumbersome, name than "Machine Age" or "Age of Power" would be, "The Age of the Scientific Approach in Industry."

The characteristic method applied to all the developments described in the preceding pages are summed up in the words, *research*, *standardization*, *control*. The first step in the introduction of modern techniques into any field consists in making a thorough investigation of all aspects of it. The substitution of exact knowledge for rule of thumb, hearsay, or opinion, makes it possible to isolate variables so that they may be charted and plotted, and, ideally, so controlled that they become constant factors. After research has revealed the patterns, be it in baking a cake, in improving an industrial process, or in scientific farming, the next step is to determine the best way, out of all possible ways, in which the result can be obtained. This step is standardization. Finally, such controls as may be necessary to maintain the standards are established.

The intertwining of technological advances and social and economic changes is so complex that it is difficult to separate one from the other. Notwithstanding this fact, certain of the changes in modern institutions can, with fair directness, be attributed to developments in technology, and it is appropriate to consider some of them in the light of the preceding discussion.

Interdependence. One of the greatest changes that modern technology has brought to society is that of increasing dependence of individuals and of separate groups upon each other. The early settlers in this country were of necessity self-sufficient, and, save for the occasional visits of itinerant peddlers, their successors for several generations maintained approximately the same status. Today the situation has so completely changed that the lives of individuals in all parts of the country are vitally affected by decisions made by coal miners in West Virginia, by the fall of rain in Kansas, by the discoveries of an obscure research chemist in a remote laboratory.

This growing interdependence has been a concomitant of the higher standard of living provided through technology. Its consistent progress over the past century and a half seems to have been at an accelerating rate, and it is easy to recognize significant stages of it within our own lifetimes. Most city and suburban dwellers have lived through the substitution of electric or gas ranges for coal or wood-burning kitchen stoves, of electric refrigerators for ice boxes, and perhaps of oil burners for coal furnaces. They have built their lives around the convenience of easy communication by means of the telephone and have come to rely upon the radio for up-to-the-minute news as well as for entertainment. The significance of the resulting dependence

upon the rest of society seems to be little realized until something occurs to interrupt the smooth operation of one or another of the conveniences that have been adopted. A hurricane, tearing down power and communication lines, can render the suburban dweller completely helpless. He is deprived of heat, light, his contact with the outside world, and possibly the use of his most reliable timepiece. Unless he has such antique relics of a past age as a candle or an oil lamp, and a stove that burns wood or coal, he is in dire straits.

This same kind of dependence extends to the industrial sphere, and renders the adjustment of the various factors of production more delicate and difficult than ever before. Problems of unemployment arise because of the worker's dependence upon his job for his livelihood; problems of material supply crop up because of railroad strikes or shortages of raw materials; problems of obsolescence arise because of developments in contiguous fields. These problems, arising in particular economic areas, tend to affect the stable operation of the economy as a whole.

Differentiation of skill. The personnel of a modern, large-sized plant consists of three groups, the directly productive workers, the technical staff, and the administrative staff. The gulf separating these three groups seems to grow wider as industrial processes grow more involved. The more complicated a machine becomes, the greater is the specialized training and skill required to design and build it and, in general, the less is the skill and experience needed to operate it. The young man who starts life as a machine tender does not, as he did in days past, acquire valuable experience that will help him rise to a position of responsibility in the plant. On the contrary, the work he does is too simple and too narrowly specialized to provide training and experience of a kind to facilitate his advancement. The better positions on the managerial and technical staffs come more and more to be filled by persons who have had specialized training for their work in trade schools and colleges. The younger a man starts and the longer he remains a machine tender, the less are his chances of going to school and acquiring the training necessary for a better position. Industry is becoming similar to the army in this respect. Just as the peacetime enlisted man usually cannot expect to reach a rank above that of a noncommissioned officer, so in the plant, the machine operator can hardly aspire to more than a foreman's position.

The highly specialized nature of the tasks in modern industry, besides creating a wide gulf between trained and untrained workers, is making it more and more difficult for either kind of worker to change his occupation. So multitudinous and so specific are the details that must be learned about the telephone, for example, that the draftsman who has spent ten years

ng them and becoming a proficient designer of telephone equipment ifficulty, in case he loses his position, in finding any other technical)yment. The very fact that he has become an expert designer of tele- s indicates that he has had little opportunity to keep up with devel- its in other fields.

)n the other hand, because of the increasing simplicity of the skills ed to tend modern machines, many people who have neither the nor the opportunity to become craftsmen, or even skilled machine ors, are enabled to do productive work in industry. Were it not for velopment, many persons who have fairly well-paid jobs would still ng as backwoodsmen or as neighborhood handymen. At the same he increased skill and training required to build the newer machines uipment has made the services of the skilled worker as indispensable .

would not be appropriate, or possible, to discuss here many of the consequences of modern technology or the economic problems that sely associated with technological trends. How these trends have been d in the growth of large-scale industrial concerns—with the multi- economic and political problems attending this growth—and how technology has affected economic stability in general, will be treated detail at later points in this book.

must be repeated that the problems that arise in our economic life ally the complicated problems of stability and control applying to nomy as a whole) are not single effects produced by single causes. nsequences of technology described above are matters to which technology is related as a "necessary condition" more than as a "causative condition." Other factors which also are involved in oblems are set forth in other parts of this book. And, of course, a)n of economic consequences of technology is incomplete unless mention is made of that consequence which has been principally rated in this chapter: our present material standards of living and —and ever higher standards—have been made possible by it.

CHAPTER SIX

How we create and use capital

INDIRECT METHODS OF PRODUCTION

The many factors affecting production today seem to be woven closely into the web of our economic life. It is difficult to separate one of them from the others for special study. One way of doing this, however, is to trace the factor in question from its position in earlier and simpler economic situations to its present position in the more complicated modern system. Our main concern is with the application of man's energies to natural resources so as to make these resources yield goods to satisfy his wants—in short, with his methods of production.

When the use of machinery is not widespread, the application of man's energies must of necessity be simple and direct. Size of output in early agricultural communities, for example, depended upon each farmer's dexterity with hoe or plow, and in hunting groups upon the hunter's accuracy in throwing a missile. In both, physical strength, knowledge of the seasons, and choice of a field of operation played a part. In both, the clever individual might devise some tool or trap which would increase his efficiency. If he should make one or the other of these things, he would be engaged in "indirect" or "roundabout" production. A striking illustration of such methods was given by Böhm-Bawerk, an Austrian economist, writing in 1888. It follows:

A peasant requires drinking water. The spring is some distance from his house. There are various ways in which he may supply his daily wants. First, he may go to the spring each time he is thirsty, and drink out of his hollowed hand. This is the most direct way; satisfaction follows immediately on exertion. But i

; he is thirsty. And it is an insufficient way, for he can never collect and store ıy great quantity such as he requires for various other purposes. Second, he ay take a log of wood, hollow it out into a kind of pail, and carry his day's pply from the spring to his cottage. The advantage is obvious, but it necessi- tes a roundabout way of considerable length. The man must spend, perhaps, day in cutting out the pail; before doing so he must have felled a tree in the rest; to do this, again, he must have made an axe, and so on. But there is still a ird way; instead of felling one tree he fells a number of trees, splits and hol- ws them, lays them end for end, and so constructs a runnel or rhone which ings a full head of water to his cottage. Here, obviously, between the expendi- :e of the labor and the obtaining of the water we have a very roundabout way, t, then, the result is ever so much greater. Our peasant needs no longer take weary way from house to well with the heavy pail on his shoulder, and yet has a constant and full supply of the freshest water at his very door.[1]

The most advantageous of the three methods is obvious. Production by third, most indirect, method not only cuts down the amount of time and ort spent getting water, but it also permits what was not possible before, :age of water and a constant supply. Modern cities would not be pos- e without municipal reservoir and water supply systems. But without previous production of necessary materials, implements, and tools, the :em could not be built. The roundabout process thus results in production iew types of goods as well as in greater output of existing types.

What distinguishes the direct method of production from the indirect ıat in the former man applies his effort, without the aid of anything ·iously made, to getting something which will be immediately useful in fying a final want; while, in the latter, he combines with his own ıgth and skill the services of instruments or other goods previously e. By virtue of this combination, he increases the quantity and variety nal, want-satisfying goods at his disposal. These instruments or other ls used in further production we may call *intermediate* goods to distin- ı them from the *final* goods which are ultimate goals of production.

NATURE OF CAPITAL

The intermediate goods are commonly known as "capital goods." In liscussion here, these capital goods are what we principally are inter-

[1] Eugen von Böhm-Bawerk, *The Positive Theory of Capital*, tr. by William Smart. :rt, New York, 1923, p. 18.

ested in. They constitute one important category of productive resources. In what follows we shall be concerned with how capital goods are created, what their productive uses are, and the quantities of them that exist and are used in the United States. The concept "capital" is a slippery one, partly because the word is used to mean different things and partly because different writers about capital define it in different ways according to the purposes each particular writer has in view.[1] Our own purposes are best served at this point by using the term "capital" to mean the intermediate products, or "capital goods" described above. Since capital consists of goods used in production, another name, "producers' goods," often is used to distinguish this category from its opposite, "consumers' goods."

Under the definition given here, coal used in the blast furnaces of a steel-manufacturing concern is capital, whereas coal used in the fireplace of a private home is not. A motor used to propel a boat around the lake of a private estate is not capital, whereas the same motor, if used to propel the boat of a lumbermill foreman from the mill at one end of a lake to his company's holdings of timber at the opposite end, is capital.

Some of the confusion caused by the physical identity or similarity between some capital goods and some noncapital goods may be cleared up by distinguishing between capital goods and "durable consumers' goods." This distinction recognizes that an important kind of producers' goods (such as plant and machinery, transportation equipment, construction apparatus) are durable, and that these producers' goods yield their services over long periods of time. To producers' goods of this kind (or, sometimes, to their value) is given the name "fixed capital." To another kind of producers' goods, such as raw materials and inventories (or, sometimes, to their value) is given the name "circulating capital." Correspondingly, consumers' goods which yield their services over a period of time, such as houses, furniture, automobiles, and refrigerators, are called "durable consumers' goods"; and consumers' goods which yield their satisfaction with only one use, such as food, are called simply "nondurable consumers' goods."

Both of these types of producers' goods are capital. It will be observed that all forms of capital can, or do, add to the supply of goods. This is true of durable capital (e.g., a blast furnace) and of circulating capital (e.g., a stock of raw materials in a warehouse). Thus, we shall, in what follows,

[1] For example, we shall have occasion, in Chapters 10 and 22, to speak of the "capital" of business firms, and, in Chapter 20, of the "capital" of banks. In these cases, the term is used in a different sense from the one in which it is used here.

use the word "capital" to mean goods which can, or do, add to the supply of goods.[1]

CAPITAL FORMATION REQUIRES A SURPLUS

The example from Böhm-Bawerk illustrates several conditions necessary to the creation of capital. In the first place, if the peasant had been so fully occupied in cultivating his land, occasional hunting, and tending whatever livestock he may have had that he simply could not take time out for ax-making, tree-chopping, and runnel-construction, his ingenuity would have gone for naught. No capital would have come into existence. Moreover, his not being able to take the time out would indicate that the fruits of his cultivating and his hunting were meager, that his efforts provided him no more than a hand-to-mouth subsistence. If he took time off, he would have nothing to live on; if he provided his minimum consumer needs, he could take no time off. Without a surplus of either time or means of subsistence, he could create no intermediate goods, could form no capital. An absolutely necessary condition for the formation of capital is thus seen to be the existence of an economic surplus.

If once our peasant were able to break out of the circle restricting his productive efficiency, he might progress by the use of ever more indirect methods of production to more and more comfortable circumstances. One bountiful crop, one unusually successful bag of game, one hour of free time out of moments stolen from daily chores, might give him this opportunity. That the break can occur, and a surplus be made to appear has been abundantly proved by the economic development of Western Europe during the last thousand years and of this hemisphere during the last four centuries. Immediate testimony of it is afforded by the extensive capital equipment of present-day industry, capital which has come into being as the result of successive accumulations of surplus and their application to productive purposes.

[1] This definition, as was suggested above, is used here because it is adapted to the purpose of this chapter: viz., to study capital as a productive resource that aids in the process of creating goods for the market. It sometimes is desirable to study capital from the point of view of its accumulation, i.e., from the point of view of saving and investment. In that case the term would need to be defined somewhat differently, so as to include some, or all, of the "durable consumer goods" that have been omitted from the category "capital" for the purposes of this chapter. Thus, in Chapter 7, the statistics describing capital accumulation through time include residential construction.

In the second place, it is to be noted that the peasant was using his own surplus and his own efforts for the creation of equipment which also would be his own. No co-operation between himself and anyone else is implied. It should be clear that such a condition is not typical of the modern economy. In industrialized countries the ubiquitous factor, division of labor, and its counterparts, occupational and industrial specialization, present quite a different situation. The difference arises out of the existing conditions of ownership and the development of occupational specialization. We shall consider these conditions as they affect the formation of capital in our economy.

THE OWNERSHIP OF CAPITAL

Private ownership of capital goods and the right to acquire and use such goods for private gain, within the limits set by law, are basic institutions in an economy of "private capitalism." That is, they are among the most important of the "widespread and habitual ways of thinking and acting" described in Chapter 1. In this country, and in others with similar institutions, the habitual modes of thought and action are defined, and in some degree limited, by law. Both the legal concept of private ownership and the economic behavior with which it is concerned are highly complicated. For example, the right of bequest and inheritance, which is a part of our customary attitude toward property, makes a great deal of difference to our economy. It does this both in the sense that it permits and promotes a high concentration of capital ownership in certain family groups, and in the sense that it provides a high degree of continuity in the creation and control of capital. The perpetuation of capital that this entails is strikingly different, for example, from what occurs in some primitive societies in which religious taboo and tribal sanction require that all of a man's belongings—his house, tools, utensils, and weapons—be destroyed upon his death. The institutions of such a community are unfavorable to the accumulation of large stocks of capital.

Many other institutional variants with regard to the ownership of capital are possible. In the socialist economy of the Soviet Union, for example, most capital is created as a result of decisions of a central planning board established by, and responsible to, the national government. This method of capital formation differs sharply from that by which monetary savings are accumulated by individuals and business concerns and are converted into capital through investment. Under both methods, however, capital is created. The difference between the two methods is primarily in

the source of authority: in our economy individuals and business concerns convert their savings into capital, and the resulting capital goods are owned by them; in the Soviet Union the central planning board decides what productive resources will be devoted to making consumers' goods and what will be devoted to making capital goods, and the resulting capital belongs to the state. This brief comparison does not pretend to explain fully the processes by which capital is formed in either country. It does, however, indicate the institutional differences with regard to authority and ownership as these apply to the formation of capital.

In our economy the right of property facilitates private saving both of goods and of money (which gives its possessor a generalized command over goods) by legally protecting the holder in their possession. Moreover it enables the owner of capital more easily to accumulate further savings. Surluses in kind or in money, however derived, can be put back into increasingly indirect and fruitful methods of production. The increase in wealth the individual engaging in such ventures is his own. Yet need he, under the conditions of our own economic life, engage personally in any of these enterprises? Is his situation always similar to that of Böhm-Bawerk's peasant who converted his own surplus, by means of his own labor, into capital equipment which also was his own?

SPECIALIZATION IN SAVING AND INVESTING

For us the questions above are merely rhetorical, so highly specialized the industries and occupations of our economy. The men who control greater part of our economic surpluses nowadays do not work in the business concerns where much of the income available for saving originates. There is no more need for them to do so than for the men who manage factories, railroads, or department stores to operate lathes, lay tracks, or tend printers. Men with savings may use them directly for productive purposes; they are more likely to turn them over to others who will find useful employment for them. Men with promotional ideas try to find others who will provide the wherewithal to put them into effect.

We have groups of workers, of technical experts, of managers, of sellers; these groups carry on the processes of physical production. We also have a group of persons and firms who hold title to accumulated money and funds; these are the investors. We have bankers and promoters; these help surplus-owners to find openings for the employment of their surpluses, the conversion of their surpluses into capital. The subdivisions of specialists are almost infinite. The important point is that the functions of

accumulating a surplus, of finding an employment for it which will create an income in the future, and of physically converting it into intermediate goods, may all be carried on by different individuals or agencies. Yet, throughout the process, title to the surplus (or to the goods or money for which it may be exchanged) remains in the hands of the original owner. The function of ownership may be completely separated from that of management just as it customarily is today from that of manual labor. Where the owner prefers to keep his surplus in the form of a deposit in a savings bank, or to accumulate it through paying premiums on a life insurance policy, the saving function may be completely separated from that of selecting the enterprise in which the surplus finally will be used as capital.

Of course it often happens that savers and investors (those who actually choose the employments to which surpluses will be put) are the same people. Many small businesses depend upon the savings of the proprietor; many an individual with savings sets himself up in his own business. Even large industrial enterprises often accumulate some part of their profits over a period of years instead of distributing them as dividends to shareholders. Having thus saved them, each such enterprise may devote them to the expansion of its own business. The firm's savings are invested in itself; a part of the earnings are "plowed back." When this happens, there is a continuation of the method of capital formation that was typical before specialization became the order of the day.

Yet the old-fashioned method is no longer typical. Ours remains an age of specialization: saving and investing in the modern world are predominantly performed by different sets of people. The business of actually making different kinds of goods—both capital goods and consumers' goods—also is specialized. While one section of industry is busy producing food, clothing, toiletries, medicines, and other consumers' goods, still another section is busy manufacturing farm implements, machine tools, and commercial airliners, extracting mineral ores for reduction in smelters, processing soya beans and rubber for a multitude of industrial uses, and producing countless other forms of capital goods.

EFFECTS OF THE RATE OF CAPITAL FORMATION

The importance of capital formation to our present economy is twofold. In the first place, future increases in productivity depend upon the continuance of capital creation. This stems, as we have seen, from the superiority of indirect, capitalistic methods of production over direct methods In the second place, stability of employment and of the national income

depends upon regularity in the rate of capital formation. This second relation requires a brief demonstration.

In our economy, the stream of national income is made up of individual money incomes derived from the production both of consumers' goods (commodities and services) and of capital goods (also commodities and services). These incomes take the forms of wages, salaries, interest, rents, royalties, profits, and commissions; all these are created by selling the goods produced. Hence in some period of time, the total national income must be equal to the total volume of expenditures for final products made by all members of the community. In general, however, there are two kinds of time lag that affect this relationship of income and expenditures: (1) a lag between a given volume of expenditures and the receipt of income due to those expenditures; (2) a lag between the receipt of income and the spending of that income. The first kind of lag is illustrated by a corporation that allows its earnings to accumulate in a bank balance for a year before paying dividends to its shareholders. The second kind is illustrated by a man who receives a salary payment at the end of a month and spreads its expenditure over the month that elapses before he receives another salary payment.

It is obvious that such time lags must occur. As long as the time involved in the various lags remains unchanged, the rate of flow of both the national income and total expenditures also will remain unchanged. But a change in the rate at which the national income is either received or spent will cause the entire cycle to be disturbed. As regards expenditures, there is strong evidence that changes in the time lag between saving and investing have been especially disturbing. Stability of national income requires that amounts saved (i.e., not spent for current consumption) out of the national income are returned, at a constant rate, to the income stream in the form of capital investment.

The possibility of a change in the time lag between saving and investment is heightened today by the circumstance that the function of saving and the function of creating capital through investment are usually not performed by the same people. Moreover, motives for saving and for investing capital are not identical. Many individuals save as continuously as they can in order to provide for the future and for emergencies. Some people in the "high income brackets" save automatically, simply because their incomes are more than large enough to take care of all their consumption needs. Many business enterprises also save as continuously as possible as a precaution against future needs, and often with a view to eventual expansion.

Most investment in capital, on the other hand, is not undertaken by individuals, but by business enterprises which see in a particular act of

expansion an opportunity to make additional profits. As openings which seem to promise future profit appear, these enterprises draw upon their own savings, or appeal to investment bankers to make the savings of others available to them. Two elements making for instability are worth noting briefly here. The first is that businessmen's expectations of profits from expansion fluctuate considerably from month to month and from year to year. The second is that the amounts of funds with which bankers supply businessmen can be either greater or less than the precise amount of savings with which the public has entrusted them. But these sources of instability will be explored at greater length in later chapters.

CAPITAL FORMATION IN MODERN TIMES

Up to this point in our treatment of capital as a productive resource we have considered some of the economic difficulties involved in its creation and use. We have described some of the more important conditions that had to be met in Western society for people to be willing to forego immediate consumption and commit their time, effort, and savings to capital formation. We have said very little about the specific forms that capital goods have taken from time to time, or of the changes in society that have influenced the rate and manner of capital formation. We shall now add to the analytical account a brief description of the institutional characteristics of capital formation through the course of recent history. This should, among other things, help to clear up a common but erroneous identification of *capital* with *money*.

The agricultural economy. The agricultural communities of the early Middle Ages operated close to the subsistence level. Self-sufficient communities were the rule; trade, the exception. Where economic surpluses existed, they were not generally employed to increase productive efficiency; they were not, in short, generally used for the creation of capital. That they were available, and increasingly so throughout the Middle Ages, is evidenced by the existence of a class of feudal nobles, by the erection of magnificent churches and cathedrals, and by the costly feudal wars of which historical records are so full.

Failure to devote such surpluses as were produced to further production may be traced to the social and economic conditions of the times. Among the factors which militated against the use of a surplus as a means of expanding future output were: (1) a low general level of comfort and a consequent high premium on the immediate enjoyment of any surplus that might appear; (2) no effective marketing system for exchanging surpluses

between communities; (3) the hostility of the Church to the principle of intensive economic activity for personal advantage.

Only with the breakdown of medieval economic isolation and of prejudice against personal economic advancement did the regular conversion of the growing surplus into equipment of increasing productive efficiency take place. Only then did capital grow.

The commercial era. As a result of these gradual changes, the surplus ıccumulated. The slow transition from the feudal, agricultural economy of :he European Middle Ages to the town-centered and commercial economy ɔf the fifteenth and succeeding three centuries saw a slight improvement in ıgricultural techniques as well as an expansion of trade in the products of 'arms, of town crafts, and of distant countries. Another important change ook place: exchanges of products were no longer made principally on a ɔarter basis. The use of money to facilitate indirect and complex exchanges ɔecame ever more common; its usefulness in expressing relative values of different commodities introduced a note of certainty—imperfect, to be sure—in he plans of the merchant bankers, traders, and early manufacturers; and its sefulness as a store of value from which future purchases might be made uaranteed it a lasting place in the scheme of economic life. From being ımply a medium of exchange, a standard of values, and a store of value, ıoney came to be considered—early in the period of commercial economy in urope—not merely as representative of wealth but, as it is popularly condered today, as wealth itself. Personal holdings of money became the obct of economic effort; personal ownership and use of productive equip:ent became simply a means to this end.

The dominance of money as both exchange medium and calculating :vice, and its status as the goal of economic effort from those times to our vn, inevitably causes us to inquire whether this money, which may be used directly to cause intermediate goods to be produced, capital equipment be created, is itself capital.

Of course, businessmen regard their liquid funds as part of their capi-. And, to the extent that money may be exchanged for goods and services ıich can be devoted to further production, it may be said to represent ntrol over capital. When exchange of money for capital goods occurs, : money is being used for capital purposes. Yet money may be an end itself; it may be sought after as a final good, perhaps for the prestige and wer its possession gives its owner, or possibly for the sake of the conıption goods it ultimately can command. Stocks of money are not, in ırt, necessarily used to create capital in all cases.

The capital that existed in western European countries during the commercial era differed from its counterpart of the early Middle Ages principally in respect to quantity, while it differed from its later counterparts in respect to type as well. During the more than three hundred years of that era, capital consisted largely of the ships, overland carriers, and warehouses of traders; of the bank buildings, countinghouses, and offices of merchant bankers and moneylenders; and to a much smaller extent, of the simple textile equipment, forges of small-scale manufacturers, primitive apparatus used in mining, and the uncomplicated tools of town craftsmen and agriculturalists.

To an extent difficult to measure, it included also the ammunition, weapons, and other equipment of the armies and navies of the competing national states of those times. This military and naval material may be classed as capital of the state employing it: it was used either to secure booty and resources or to protect the domestic economy so that it could carry on further production of an unwarlike type. Even though they destroy rather than produce, armaments continue even to this day to be a means *par excellence* by which one nation may hope to increase its wealth at the expense of other nations; such armaments may also be the only means by which a nation can defend its wealth against foreign aggressors.

The industrial era. By the eighteenth century the expansion of trade frontiers had slowed down. Wealth accumulated in trade had reached large proportions. Devices—banks and joint-stock companies—through which individuals could pool their wealth for capital purposes had developed to a high degree, although they were not universally held in high repute. Moreover, the wealth which had been accumulated was concentrated in relatively few hands, as the merchant bankers, traders, and large landholders had, with the sanction of the Puritan ethic of worldly self-improvement, not scrupled at taking what economic advantage they could of the field laborers, homeworkers, and dependent artisans of country and town. The stage was set for further expansion if new fields for the use of capital could be opened.

The wave of invention which arose in England in the eighteenth century broke down barriers to expansion, and the new fields were opened. Notable advances were first made in the textile industry, where large factories with elaborate machinery soon took the place of small shops and, in so doing, curtailed the domain of the putting-out system. Capital appeared also in the form of iron and steel works, as well as in heavier equipment for more numerous and deeper mines. There was some investment in canals, but from the beginning of the nineteenth century capital went chiefly into factories with heavy machinery, steamships, and—most characteristic of nineteenth-century investment in England and in the United States—rail-

roads. Wars continued to be fought, but even the wealth which they absorbed constituted only a small part of the total. The improved quality, widened variety, and increased quantity of finished commodities, which distinguished the nineteenth century from preceding ones, were reflections of the efficiency and range of new capital equipment.

The assembling of large aggregates of capital was facilitated during this period by the formation of increasing numbers of joint-stock companies, of which modern corporations are direct descendants. Concentrations of wealth became even greater than they had been before. Moreover, the new joint-stock companies duplicated and strengthened the monopolistic aspects of earlier, relatively large-scale enterprise, and the stockholders who owned the companies, as well as the managers who operated them, took advantage of the knowledge that greater profits often could be made by producing less of a commodity than could be made by producing more. Monopoly profits came to apply to business operation on an increasing scale.

The era of finance capital. In the eighteenth and early nineteenth centuries individuals in the rapidly industrializing countries pooled their capital resources in corporations in order to increase their profit-making opportunities. In the late nineteenth and early twentieth centuries, corporations, in turn, pooled their capital resources for the same purpose. In both cases money profits were the immediate goal. But, in the first case, this goal was typically reached through sales of commodities and services, whereas, in the second, while still principally so derived, profits came increasingly from sales of rights in the anticipated (and largely monopolistic) gains to be derived from corporate mergers, consolidations, and holding companies. Enterprising individuals discovered that, simply by magnifying the prospects for savers to make profits from investing in such combinations, the promoters could induce the savers to finance them. In exchange for stock certificates and bonds—claims to the future earnings of the combinations—promoters received from the saving public immediate cash. As reward for their promotional services, promoters typically diverted some part of this cash—representing potential capital—to profits for themselves.

So widespread became the practice of making profits out of such financing, so general became the traffic in "rights" to income, that the years during which they developed into full flower have come to be called the "age of finance capital." We have not yet outlived it. But neither have we stopped the production of iron and steel or of such new types of capital as electric power systems, commercial airplanes, motor trucks, and giant harvesters. Indeed, of such preponderant importance has the creation of capital equipment continued to be, that the "age of finance capital," can be said

only to have been superimposed on the "industrial era" and not to have superseded it. The expression "finance capital" is eloquent testimony to the popularity of identifying money, or claims to money, with capital. The very necessity of modifying "capital" with the word "finance" should be ample reminder that the peculiarity of the age is that capital in the functional sense and "finance" or "money capital" need not be, and frequently are not, equivalent.

GROUNDS FOR INSTABILITY IN CAPITAL FORMATION

We may conclude from what has been said that our own major economic problem is not how to produce a surplus, but by what arrangements to insure that the size of the surplus we are capable of producing will be maintained, and even increased, from year to year. During the depression of the 1930's in this country, production of capital equipment fell much further below the level attained in the twenties than did production of consumption goods. Such variations in output are not due to single causes; they may not even be due to a single group of causes. Yet once expansions or contractions in economic activity set in—for whatever reason—they tend to be aggravated by disproportionate changes in the production of capital goods.

This tendency appears to be due to a number of factors which are more or less closely related to each other. Some of the most important of these are: (1) the demand for capital goods is a so-called derived demand; (2) much investment is associated with technological changes, and the latter occur in a very uneven pattern; (3) the production of capital by highly indirect methods takes time; (4) many forms of capital are highly specialized; (5) decisions of one producer to create capital are made independently of decisions of other producers, and all such decisions are affected by highly capricious psychological factors concerning business expectations. Each of these grounds for instability in capital formation will be examined briefly.

DEMAND FOR CAPITAL GOODS A DERIVED DEMAND

The demand for capital goods is *derived* from the demand for consumers' goods; that is to say, capital goods are produced only with a view to their use, in turn, for making consumers' goods. It is easy to see that this fact, coupled with the further fact that most capital goods are very durable, makes for relatively large fluctuations of output on the part of firms making capital goods. The total demand for shoe manufacturing machinery, for example, is made up of two components: (1) the demand for machines with

vhich to replace old machines that have worn out, and (2) the demand for ıachines due to an increased demand for shoes by consumers. The result that a relatively small increase in the demand of consumers for shoes, for xample, may cause a relatively large increase in the demand of shoe manuıcturers for machines, and that a relatively small decline in the demand of ɔnsumers for shoes may cause a relatively large decline in the demand of ıoe manufacturers for machines. Since this condition involves *proportions* ther than absolute quantities, a change in the *rate* of growth, or of decline, the demand for shoes may have disproportionate effects on the demand ır machines. This tendency making for irregularity of demand for capital ɔods is known as "the principle of acceleration." It will be considered in me detail in Chapter 9 as one of the factors involved in cyclical ups and ıwns of economic activity.

Two qualifications to the force of this tendency must be mentioned iefly here. In the first place, when some durable capital equipment is idle, ɛreases in consumers' demand for the final product may be met by bring- ; idle equipment into operation. Some industrial firms typically maintain ne measure of "stand-by" capacity as a cushion against what are expected be temporary changes in consumers' demand. Most public utility comıies, for example, follow such a policy. In the second place, changes in ısumers' demand may be reflected in changes in manufacturers' and disɔutors' inventories of intermediate and final products. A retailer of men's ɛs, for example, may meet irregular changes in consumers' demand by ing his stocks decline or by letting them build up over a period of time. may in this way serve as another type of cushion for the manufacɛr of shoemaking machinery.

EGULARITY OF TECHNOLOGICAL CHANGE

Some variations in the rate at which additions are made to the stock apital can be traced to changes in the demand for individual consumers' ds. Yet the desire to exploit an invention—to cut the cost of making e item already in production, or perhaps to offer an entirely new prodor service, the demand for which can confidently be anticipated—here frequent motive for making investment expenditures. In this case the and for capital goods is derived, not from any prior increase in conɛrs' demand for the product, but from the *anticipated* growth of umers' demand for a cheapened product, or for an entirely new prodThe construction of automatic machinery for making electric lamps pened a product already enjoying a wide sale; the demand for equip-

ment to manufacture television sets anticipated consumers' demand in an entirely new field.

The demand for the capital goods needed to exploit technological changes is irregular because inventions themselves occur by fits and starts. The new process moves from the laboratory to the pilot plant; the new product must be tried out experimentally among a limited group of consumers. The "bugs" have to be removed, often painfully and slowly; then—often quite suddenly—the commercial stage is reached and large capital expenditures are made. Nobody can predict just when this will happen.

CAPITAL PRODUCTION TAKES TIME

As increases occur in the demand for consumers' goods, the production of capital is set in motion. Before the new capital goods are ready, consumers' demands may have changed again, this time downward. An illustration is offered by the construction of office buildings in New York City in the late 1920's. Some of these had not been completed by the time of the stock market crash in the fall of 1929. Investors in these buildings had anticipated a continued expansion of business in the New York market which would have justified the additional office space. Their anticipations proved incorrect. The period of construction was so long that quick adjustment of the output of these capital goods to the decline of the market for their services was impossible. Moreover, the element of durability enters again. The buildings were not erected to meet the demand of 1929 or 1930. They constituted durable capital expected to yield remunerative services over a long period of years. New York thus came to have an excess of capital, in the form of office space, which left a part of its construction industry without significant employment for years. Instability of the economy also occurs when the demand for a commodity or a service (as for office space in the example given) increases more rapidly than the appropriate forms of capital can be provided.

THE SPECIALIZED NATURE OF MUCH CAPITAL

Many forms of capital tend to become more and more highly specialized. If the demand for the services of shoemaking machinery in the men's shoe industry declines, the operators of such machinery may be able to find employment in other parts of the industry or in other industries. It is less likely that the specialized machinery which has been displaced can find similar alternative employment. Much machinery is both unversatile and

intractable. Once constructed, it is able to meet only one particular type of demand. If that demand fails, investors in the machinery sustain losses which cannot be compensated by shifting their capital to other uses. What might simply be transitional unemployment for versatile, mobile factors of production becomes protracted unemployment for specialized, fixed factors. We use the general term "factors" here instead of the specific classification "capital" to acknowledge that other productive resources (laborers with specialized skills, for example) may also have little occupational mobility and may confront a similar problem. It must be remembered that we are not attempting here to account for economic instability in terms of the peculiar properties of capital; our object is to show how some of the peculiar properties of capital affect, and are affected by, economic instability.

LACK OF CO-ORDINATION OF INVESTMENT DECISIONS

Decisions of one producer to create capital are made independently of similar decisions by other producers. In the example given of office building construction each investor made his own best estimate of the demand his project would satisfy. There is no statutory law and no economic principle which determines what part of an anticipated increase in demand each prospective investor may expect to supply. There was a possibility early in 1929, therefore, that construction would be overdeveloped even had no general depression occurred. If we could assume that good and bad guesses of investors would cancel out, that high profits on the one hand and losses on the other would result in generally maintained income, we should have no general problem, although there would be problems of individual hardship. But as a later discussion of business cycles (Chapter 9) will indicate, good and bad guesses do not tend to cancel out; expectations of profit at some times and of losses at others appear to extend through the business community in epidemic proportions.

Thus our economic operations are marked by waves of unjustifiably high capital creation and troughs of unjustifiably low capital creation. Individual producers make their own estimates of demand and their own decisions to invest; each one may, therefore, expand with a view to absorbing *all* of an expected small increase of demand, or retrench with a view to absorbing *all* of an expected small decrease. Yet to supplement their own judgment, investors observe the judgments of each other and are influenced by them. So the technological grounds for disproportionate responsiveness of capital-goods creation to changes in consumers' demand tend to be supplemented by this psychological factor of investors' judgment.

CAPITAL FORMATION AND NET NATIONAL PRODUCT

Each year there is produced in this country a quantity of goods (including services) that are ready to be consumed and also a quantity of intermediate goods or capital. After making appropriate deductions (to be explained in Chapter 7) from this gross national product, what is left constitutes, for a particular year, our net national product. The significance of capital creation to our national wealth may be seen by examining movements both in the annual net national product of the United States and its principal component parts. Our interest at this point is not in the distribution of the national product among individuals and groups; this important aspect of *income* will be dealt with in Chapter 8. Our present purpose is, instead, to show what quantities of commodities and services of all kinds are produced in the United States, and to show what part of this total product consists of capital. For this purpose, the components that concern us are three: consumers' goods and services, net capital formation, and government output. In principle we could divide government output between consumption and capital, as we divide output produced by private industry. Public librarians furnish consumer services; new highways are a kind of capital good. But statistically this is difficult to do; also the factors which influence government output are different from those which affect the output of private industry. For these reasons government output is treated here as a separate category.

Problems presented by war production. If we were interested only in peacetime conditions, we could study movements of these three components of net national product without dividing them further. The first category would represent the goods and services which are the final object of our productive effort, and which as consumers we buy in the market. The second category would include services furnished and investment undertaken by government. The third category, net capital formation, rounds out the peacetime net national product by accounting for additions to our capacity to produce goods and services.

But if we apply the same threefold division to the war years, we have to decide under which heading to include war output. Should war output be included with other government output? Certainly the consumption of ammunition and battle equipment does not yield satisfactions to individual consumers, or result in public improvements, comparable with those obtained from the peacetime services of government. Nor can war output be added to the output of ordinary government services without so distorting

the totals for the war years as to make them incomparable with the totals for peacetime years. Should we then include war output under capital formation, arguing that military equipment and material contributed to consumer satisfaction indirectly as capital by protecting from destruction the institutions and, indeed, the domestic physical plant, upon which our continued production of consumer goods and services depends? This might seem sounder, but comparability is again a consideration. If we followed this method, any comparison of wartime with peacetime capital formation would be very misleading. The wartime totals could not be used for what should be their most revealing purpose, an indication of changes in amount of an important economic resource. May we ignore war output entirely, arguing that it contributed nothing to net national product? Such a heroic plan must be rejected, for the resulting totals of national product would completely fail to reflect the vast wartime productivity of our economy.

The record of recent years. Accordingly, for the years 1939-46 the output of war goods is shown separately in Fig. 3. A word of explanation should be given as to how to read the chart. For each year the right-hand bar shows total net national product, the center bar shows consumer expenditures and government nonwar output, and in 1939-46 war output also. The difference in height between the right and center bars measures the remaining component—the net capital formation of the year concerned—and for convenience this item is shown separately as the left-hand bar. The height of the right-hand bar is, of course, equal to the sum of the heights of the center and left-hand bars. When the right-hand is shorter than the center bar (as in 1932 or 1943) net capital formation is negative, i.e., capital worn out during the year was not fully replaced.

Perhaps the most striking fact shown by Fig. 3 is that although the value of net additions to capital equipment constituted more than 8 per cent of net national product in the boom year, 1929, there were no net contributions in the depression years, 1931-35. In each of the latter years the value of capital used up was greater than the value of replacements. During these years producers economized by cutting down on their purchases of capital for replacement purposes. The net effect was that the economy was, to the extent shown for each year, living on its capital equipment —i.e., consuming it rather than maintaining or increasing it.

Economic activity oscillated widely during the prewar years. Expenditures on consumer goods fell from $79,000,000,000 in 1929 to $49,000,000,000 in 1932. Net capital formation for the latter year actually was a minus quantity. Again during the recession of 1937-38 (which appears on the

Figure 3 **APPORTIONMENT OF NET NATIONAL PRODUCT BETWEEN NET CAPITAL FORMATION AND OTHER COMPONENTS, 1929-1946**

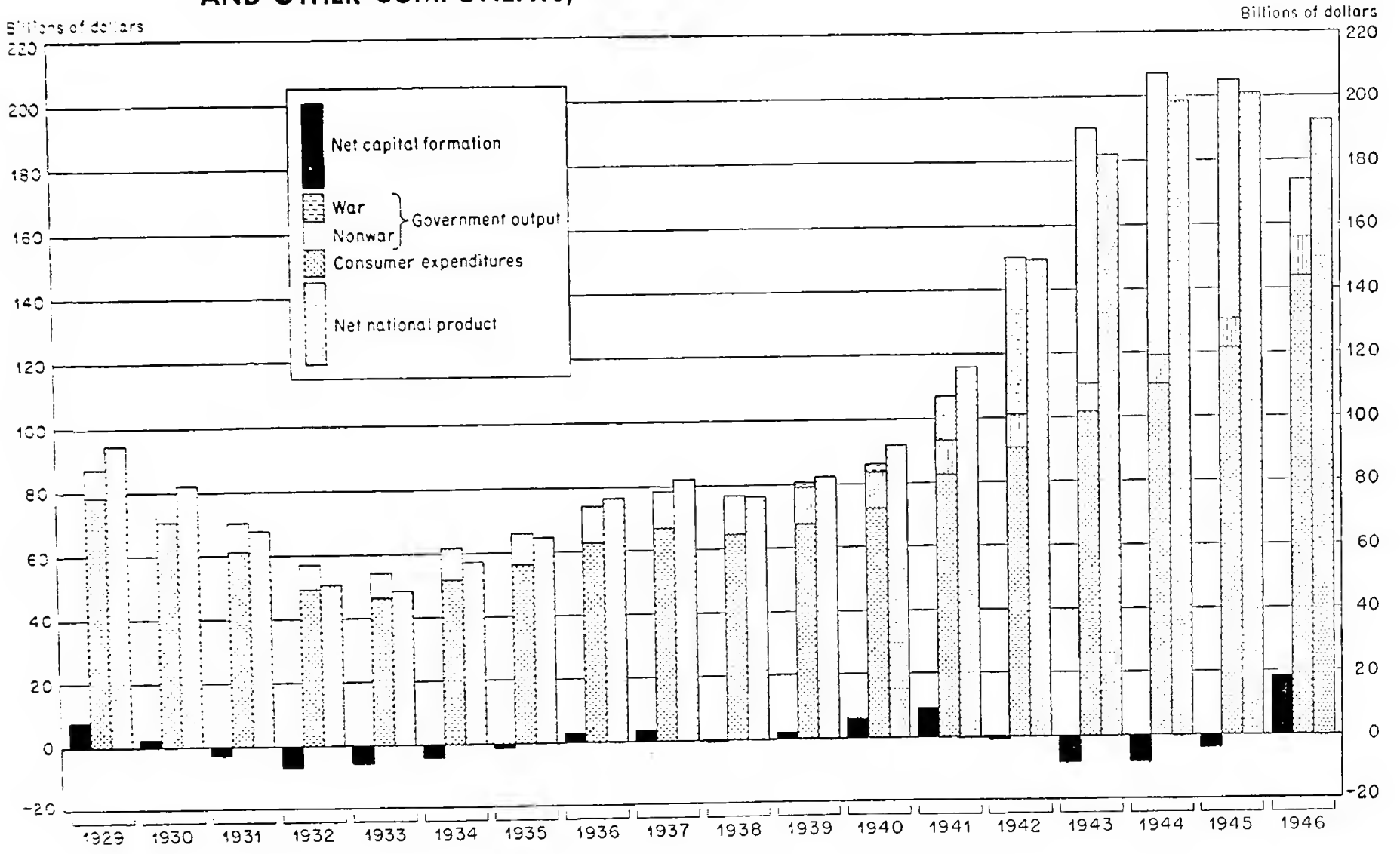


chart as a decline of net national product in 1938) net capital formation became negative in the latter year.

The fact that consumer expenditures and capital formation move in the same direction is no accident. For a decline in the former will discourage new capital investments and induce postponement of replacements. A decline in the latter will diminish incomes in the capital-goods industries, and so reduce consumer expenditures. Thus, changes upward or downward in either type of expenditure have secondary effects as well as immediate ones. The greater the change, the greater are both the immediate and the secondary consequences. Because large rises and falls are more frequent in capital outlays than in expenditures for consumers' goods, there has been much discussion in the last few years of the desirability of investment by governmental bodies in public works as a means of offsetting a decline in private demand for capital goods. These proposals will be discussed further in Chapters 9 and 31.

The impact upon net national product of resumed federal recovery expenditure, and an improved business outlook due at least in part to preparations for war in Europe, are reflected in the figures for 1939. Not until 1941 did our war output reflect the actuality of our own involvement. Yet the net capital formation figures for 1940 and 1941 indicate that general industrial expansion had set in strongly. This may be traced to the primary and secondary effects of increases in any one component upon the others. By 1942 government-sponsored expansion and government controls of the use of materials for nonwar purposes had raised war output almost fourfold over 1941, and had induced a drastic curtailment in private capital formation. For the years 1942-45, we may observe again the phenomenon of negative net private capital formation. This time it registered the diversion of resources to war output rather than a failure to employ resources—the case in the period 1931-35.

THE STOCK OF CAPITAL

The amount of net capital formation during particular years tells us nothing about the stock of capital wealth that the nation has accumulated. Net annual additions to (and subtractions from) the stock indicate merely the yearly amounts of change in our total capital wealth. Economists in this country have been especially concerned with problems involving direction and rates of change, so that information concerning our total stock of capital is scant.

Several features stand out. The relative decline in agriculture is espe- y prominent. Were it not for the agricultural boom during World I, the decline would undoubtedly have been uninterrupted. (Figures he 1940's, did we possess them, would probably show another tempo- halt in the decline.) Almost as striking is the rise in the proportion of al in the last category, publicly and socially owned property. This evidence of both the absolute and the relative governmental invest- in public works projects, educational plants, hospitals, public build- and the like. The almost constant percentage of capital in the public ies industries suggests the very close relation between growth in wealth population and growth in public utility services. A similar relation is sted by the steadiness of the figures for residential value. The propor- l decline indicated by the 1938 figure suggests the extent to which ruction of new homes was arrested by the long depression of the s.

The second and third categories, "mining and manufacturing" and r industrial" contain such diverse elements that generalizations are dif- to make. Yet in the former category it is clear that a steady propor- gain was made until the 1930's. Figures for 1948 would, in view of xpansion of our mining and manufacturing output during World War obably show a substantial relative gain. The latter category, "other trial," includes certain service industries, commercial buildings and ment, hotels and the like. These have roughly held their own as our ial capital has increased.

These figures, supplemented by measures of employment in the various of industry, offer a reliable general account of the changing structure American economy. They are of interest in connection with at- s to judge employment opportunities, changes in occupational pat- and the directions in which technological frontiers will be most rap- xtended. They provide, in short, basic material for individual eco- judgments and for governmental economic policy. For our present ses, they indicate the principal general forms taken by capital accumu- in this country.

SECTION THREE

OUR NATIONAL PRODUCT AND NATIONAL INCOME

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OUR NATIONAL PRODUCT AND NATIONAL INCOME

INTRODUCTION

A functioning economic system uses a great many different kinds of resources and combines them in all sorts of ways. Its purpose is to produce annually a vast flow of varied goods and services. Some of them—from peanuts to automobiles—go to consumers. Others—machine tools and bulldozers, for instance—are added to the stock of productive equipment, or may be needed to replace worn-out machines.

In the preceding section we studied the nation's resources—human and material. This section is concerned with the flow of output or product, its size and variability from year to year, and its distribution among various uses. We are equally concerned with income, for incomes are earned by resources in making the product—and it is to income receivers that the product is sold.

For an entire nation the aggregate flow of goods and services is called the national product, and the aggregate flow of incomes the national income. With some exceptions, incomes are received only in return for productive services, and their size depends upon the bargaining power of workers and others who control productive resources. The share of the product received by individuals or groups is settled by the incomes they can obtain. Through luck, skill, or inherited wealth, some persons have large incomes and can afford to indulge expensive tastes; through misfortune, ignorance, or bad management, other persons have small incomes and can barely satisfy their physical needs.

We shall see, further, that the national income is extremely variable from year to year. The economic system, in other words, does not work with the same efficiency all the time. Periods of "prosperity" during which

the flow of product is large, and workers have little difficulty in finding jobs at good wages, alternate with periods of "depression" during which many workers seek jobs without finding them, and other productive resources are not fully utilized. Such "business cycles" have characterized our economic system at least since the Industrial Revolution. Their causes are not fully understood, but fluctuations in investment activity seem to be close to the heart of the problem.

The three chapters in this section are concerned with the scale of production in the United States, with the magnitudes of the national income and its components, and with the variability of economic activity through time. For the most part, therefore, they are concerned with the facts and figures of the case. Out of these facts and figures numerous problems emerge. For example, the degree of inequality in the distribution of incomes, and the extremely low level of a sizable proportion of American incomes, is a primary cause of unrest, and also is, in some respects, a factor making for economic instability. Answers to these problems vitally involve the public interest. Again, if serious depressions could be prevented from occurring, an important cause of poverty as we have known it would undoubtedly be removed. The facts and conditions presented in this section of the book provide a necessary background for all that is studied in the later sections.

CHAPTER SEVEN

How production generates incomes

CAPITAL AND INCOME

Large amounts of capital are indispensable to any industrialized nation. We need not be surprised if the Russians and other peoples engaged in the process of industrialization sometimes seem to regard the acquisition of capital instruments, and yet more capital instruments, as the be-all and end-all of economic activity. Yet, when we say that the United States is, comparatively speaking, a wealthy nation, we do not merely mean that this nation possesses a more handsome, a more valuable, or a more varied collection of capital equipment than do other peoples. We may mean this; but we also mean—and this is more important—that the available flow of needed goods and services for day-to-day use is more ample than it has yet become in other parts of the world.

Of course these two ideas are connected. Largely because our capital equipment is elaborate and extensive, our annual output of goods and services is large. The poverty of present-day China is reflected both in a comparative scarcity of capital instruments and in low living standards. In large measure the first condition explains the second. The belief of economically backward nations that the acquisition of capital instruments will raise their living standards is fundamentally justified.

Such ideas are commonplace enough. Yet clarity requires that we distinguish means from ends as sharply as we can. And such a distinction is involved here. Let us agree that the ultimate purpose of economic activity is to satisfy the wants of consumers. (We neglect for the moment the question whether consumers know what they want; also problems raised by the

inequality of consumers' spending power.) In that event the function—the *only* function—of the economic system is to pour forth year in and year out such a stream of goods and services as will go furthest toward satisfying consumers' wants. To this end capital instruments—no matter how intricate, elaborate or handsome—are only a means. If raw materials are not available, if consumers lack purchasing power, or if the product it is designed to manufacture is obsolete, then the capital instrument is worthless. Such was the fate of eastern canals upon the advent of the railroad, and of western mines upon the exhaustion of their deposits.

For the community as a whole, capital is merely a means toward income. And what is true for the community as a whole is true, by and large, for the individual as well. Property is valued for the income it is expected to yield. This is illustrated graphically when securities fall in price because of a cut in dividends. Yet the income accruing to an owner of property need not take the form of cash; for example, a homeowner obtains much-needed living space, while the satisfactions which a yacht or a collection of old masters yield to their owners are sometimes described as "psychic income." However, the analogy between the individual and the community should not be pressed too far. A high-salaried individual may receive much income, yet possess little capital. Not so a nation. The more capital a nation possesses, the larger will be its flow of income.

The distinction between capital and income is a distinction between means and ends. It is also the difference between a stock and a flow. The collection of tools and machines, structures and improvements, inventories of materials and goods in process, which go to make up the nation's capital at any particular moment has no time dimension: it can be measured only as of a given day and hour. The flow of income, the output of commodities and services available for the satisfaction of wants, refers always to some definite time period, a day, a month or a year. The difference is worth noting, for it recurs again and again in the discussion of economic problems. For instance, the accountant draws precisely the same distinction between a firm's balance sheet, or statement of condition, on the one hand and its income statement, or profit and loss account, on the other. These two important types of financial statement, both of which are in general use by business concerns, will be described in Chapter 10.

In Chapter 6 we discussed the more important types of capital, and observed the vast increase in capital which has occurred in the United States since 1880. We turn now to an examination of income, i.e., national in-

come or national product. We shall find that income is a better clue both to economic well-being and to economic efficiency, than is capital. Also it is easier to measure.

In this chapter we shall seek to define national income and product, and in Chapter 8 we shall review the distribution of the national income, and observe how its size has varied over the years.

HOW INCOMES ARE GENERATED

Income and output are two aspects of the same process. In a sense this is obvious, yet such a bald statement leaves much unsaid. The production of output and the generation of incomes are both concentrated in business enterprises. Therefore we must look a little more closely into the way in which business concerns function.[1] The typical enterprise produces goods for sale. It may sell these goods to ultimate users; then we call the goods *finished output.* (Finished consumers' goods are sold to individuals; finished capital goods to other enterprises.) Or it may sell what it has produced to another enterprise for further fabrication: in that case the output is described as unfinished.

So much for what the enterprise *sells.* What does it buy? Its purchases consist of materials, labor, and the services of capital instruments. The last is a complex item. The price paid for the "services of capital instruments" includes depreciation or replacement of equipment, interest on money borrowed in the past to purchase land or equipment, rents paid for use of land or equipment owned by others, and profits accruing to corporate or individual proprietors. In addition, the enterprise pays taxes.

Let us analyze the value of the output of a single enterprise in the manner indicated. In order to take account of possible changes in the inventories of materials or finished goods held by the firm, we shall henceforth speak of output produced (instead of sold) and materials used up (instead of purchased).

[1] Although the language of this discussion is most obviously and directly applicable to capitalist enterprise as we know it in the United States, the principles involved have a much wider validity. They apply wherever labor and materials are purchased and output is sold by administrative units having individual accounting responsibility, regardless of the character of the markets in which buying and selling occur or the type of incentive governing management decisions. The principles to be discussed are therefore equally valid for a system of state capitalism such as that of the Soviet Union as they are for the American economy.

Thus the mere fact that a business pays wages, interest, and rents and earns profits from producing and selling output means that it generates incomes—for the wage earner, the bondholder, the rent receiver, and the stockholder—in the process.

INCOME ACCOUNT FOR A SINGLE ENTERPRISE

Value of output produced	=	Value of materials used up
		+ Wages and salaries of employees
		+ Depreciation
		+ Interest paid
		+ Rents paid
		+ Profits of proprietors
		+ Business taxes

But the principle we are investigating is really much broader than this. For in fact the total amount of income generated by any economic system during a given time period, say a year, must exactly equal the value of its *net output*, i.e., the value of *finished* goods and services produced, *after* deducting the value of goods used up in production. To see that this is so, we must extend the above analysis to include the entire economy. Let us first construct income accounts for all enterprises, and then add them. The following identity has the same form as that just given.

SUM OF INCOME ACCOUNTS FOR ALL ENTERPRISES

Value of output (finished and unfinished) produced by all enterprises	=	Value of materials used up
		+ Wages and salaries
		+ Rents
		+ Interest
		+ Profits
		+ Depreciation
		+ Business taxes

But materials purchased by one enterprise represent the unfinished output of some other enterprise; let us deduct these amounts from each side of the account.

CONSOLIDATED INCOME ACCOUNT FOR ALL ENTERPRISES

Value of finished output produced by all enterprises	=	Wages and salaries, interest, rents paid, and profits earned by all enterprises
		+ Depreciation
		+ Business taxes

With the compilation of a consolidated income account for all enterprises, the chief remaining step in setting up such an account for the nation as a whole is to make allowance for the activities of government. Let us think of government as a single vast "enterprise" performing a great number of services for the community at large—providing schools and highways, administering justice, fighting the nation's enemies. A negligible fraction of these services is sold for cash. While this fact is no reflection upon the value of the government's services to the community, it prevents us from measuring governmental output as we did the output of private business—by its sales proceeds. Instead we may follow the practice usual among statisticians and (without begging too many questions) value the output of government at cost. In principle the cost of government should include an allowance for depreciation of public property; however no satisfactory estimate of this item has ever been made.

INCOME ACCOUNT OF GOVERNMENT

Value of government output (government purchases of goods and services)	=	Value of goods and services purchased from business enterprises
		+ Wages and salaries of government employees
		+ Interest
		+ Rents

By combining this account with the preceding one we obtain a consolidated income account for the entire national economy. Just as the value of unfinished output appeared on both sides of the account and disappeared through cancellation when we combined the accounts for enterprises, so the value of goods and services purchased by government from business enterprises is part of the finished output of the latter and disappears on consolidation.

CONSOLIDATED INCOME ACCOUNT FOR ALL ENTERPRISES AND GOVERNMENT

Value of finished output produced by enterprises (except that sold to government) + Value of government output	=	Wages and salaries, interest and rents paid by enterprises and by government; and profits earned by enterprises
		+ Depreciation of business capital
		+ Business taxes

We have distinguished the main kinds of income, and the categories in which it is measured. Finished output sold by enterprises to individuals consists of consumer goods and services, or *consumption*. Finished output sold by enterprises to other enterprises consists of capital equipment and structures, and its value is known as *gross investment*.[1] Government output we have agreed to measure by the cost of *government purchases of goods and services*. These three items are together known as the *gross national product*. Meanwhile, the first item on the right-hand side above, the sum of all wages and salaries, interest, rents and profits, is known as the *national income*. We can therefore rewrite as follows the consolidated income account for the nation as a whole.

ANALYSIS OF GROSS OUTPUT

Gross national product at market prices (consumption + gross investment + government purchases of goods and services)	=	National income (wages and salaries, interest, rents and profits) + Depreciation of business capital + Business taxes

We can now attribute quantities to these several items. Their values for the year 1946 are shown in Table 5. Gross national product in that year totaled $203,700,000,000, and national income $178,200,000,000.

Table 5 GROSS NATIONAL PRODUCT AND NATIONAL INCOME, 1946

(in billions of dollars)

Consumption	143.7	National Income	178.2
Gross investment	29.4	Depreciation	11.1
Government purchases of goods and services	30.6	Business taxes	14.4
Gross national product at market prices	**203.7**	Gross national product at market prices	**203.7**

It will be apparent from this discussion that only a part of the sale proceeds of the economy's gross national product becomes income. Of the cost

[1] Obviously any capital equipment or structures that a firm produces for itself is also a part of gross investment. Investment also includes any net addition to business inventories and any net increase in claims against foreigners; these items are included in the figures for gross and net investment, and are discussed below. In theory, investment should also include government expenditures for capital purposes, such as public works; unfortunately lack of data prevents the separation of such capital from current government expenditures.

f producing output, that part which consists of depreciation charges and usiness taxes is not included in national income. Why not?

Let us begin with business taxes. In the calculation of national income, iis name is given to those taxes which are included in the market prices of oods. They sometimes are called "indirect taxes" in the sense that they :e assessed against business concerns engaged in producing some kind of roduct and are "passed on" by these firms to the buyers of their products irough the prices that are charged. Business taxes consist largely of excise :xes on such commodities as liquor and tobacco.

If we could observe what happens to the twenty cents we pay for a ack of cigarettes, we would see that perhaps eleven cents is paid out by ie distributor, manufacturer, or tobacco farmer in the form of "wages and laries, interest, rents, and profits," i.e., is paid out as income. This eleven :nts is the amount which it cost the community to produce the cigarettes, :., the value of the productive services embodied in the article. The other ne cents—we have supposed—is taken by the government in tax. It repre-nts a simple (but compulsory) transfer of purchasing power from the irchaser of the cigarettes on the one hand to the tax collector on the other; is in no sense a payment for productive service. But national income easures the value of productive services rendered by the community. This why we exclude business taxes from national income.

Next we ask why "depreciation" is excluded from income. This com-)nent of the price of the product is simply another name for the value of pital goods consumed or used up in the process of production. Alterna-'ely, we may think of depreciation as the value of freshly produced capital)ods currently needed by enterprises for replacement purposes. The part gross output needed to make replacements is, so to speak, mortgaged in vance. That is to say, it is not a net addition to the stock of capital. In der to measure the output which is truly available for consumption, or is iet addition to the stock of capital—that is, to measure the community's :ome—we should deduct from gross national product those items needed r replacement purposes. Such items are included in gross investment, and is from this component of gross national product that the deduction has be made. The value of capital goods not needed for replacement, but ailable for expansion, is known as net investment. The corresponding)duct total (gross national product minus depreciation) is called *net na-nal product.* We may now rewrite the nation's consolidated income :ount.

ANALYSIS OF NET OUTPUT

Net national product at market prices (consumption + net investment + government purchases of goods and services) = National income + Business taxes

The qualification "at market prices" is necessary because, as we shall see in a moment, there are two ways of measuring net national product. Evidently the whole market value of the net output becomes income, except for the item "business taxes." Hence the price for which any commodity sells in the market may be divided into two parts: (1) the amount paid for the productive services of some worker or capitalist, i.e., the remuneration of some "factor of production"; and (2) taxes paid by the enterprises engaged in producing the commodity. The first of these—the remuneration of the factors of production—is called the *factor price* of output. Thus the market price of output is equal to its factor price plus taxes levied on its production.

"National income" measures the community's net output, just as does "net national product at market prices." This net output consists in the two cases of identically the same goods and services. But in the national income total they are measured at factor prices instead of market prices. National

Table 6 NET NATIONAL PRODUCT AND NATIONAL INCOME, 1946

(in billions of dollars)

Consumption		143.7	National income		178.2
Durable goods	14.9		(equals net national product at factor prices)		
Nondurable goods	87.1		Wages and salaries	116.8	
Services	41.7		Profits of unincorporated business	35.0	
Net investment		18.3	Interest and rents	10.0	
Gross investment	29.4		Corporate profits	16.4	
less Depreciation	11.1				
Government purchases of goods and services		30.6	Business taxes		14.4
Net national product at market prices		**192.6**	Net national product at market prices		**192.6**

ıcome may in fact be defined as "net national product at factor prices." Thus the qualification "net" excludes depreciation; the qualification "at actor prices" excludes business taxes.

The totals for the United States for the year 1946 in Table 5 are earranged in Table 6 to show net national product and national income.

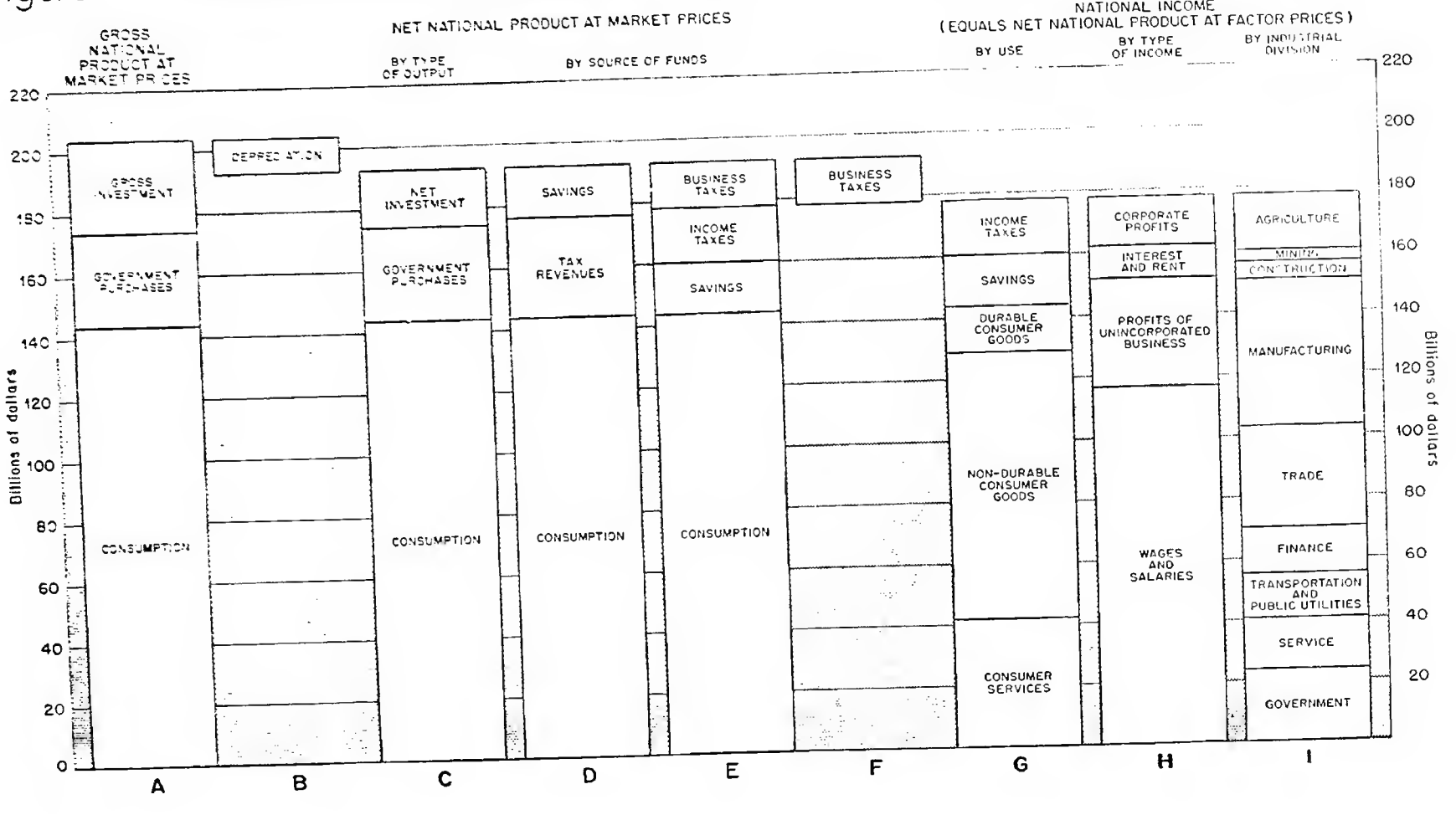
Let us review the various steps in the argument to this point. In oing so we shall refer to Fig. 4 (p. 160) showing figures for the year 1946 as in Tables 5 and 6). *Gross national product* ($203,700,000,000), composed of consumption, government purchases and gross investment, appears n the left-hand side in column A. With the removal of depreciation, ıown in column B, there remains *net national product at market prices* $192,600,000,000) in column C. Column D shows how net investment and overnment purchases are financed out of savings and tax revenues. Column is simply a rearrangement of column D. In column F business taxes are educted, in order to convert from net national product at market prices) *net national product at factor prices.* In column G we have national in-ɔme broken down by use, and in column H by type of income, as in able 6. In column I the same total is divided according to the industry which the income originates.

THE GENERATION OF INCOMES SELF-SUSTAINING?

This chapter has described the manner in which production generates comes. Inevitably the comparison of value of output with income gen-ated led to the consideration of national product and national income. :fore we pass to other aspects of income and product, let us pause briefly look at the money flows involved in the production process and to ask urselves whether the generation of incomes is likely to be a self-sustaining ocess. It will be convenient to think in terms of the distinction, useful if mewhat artificial, between "the public" (income receivers and consumers) the one hand and "business" (income disbursers, which, for this par-:ular purpose, will include government) on the other.

We shall first briefly dispose of a rather obvious misconception which metimes creeps into the public press. We have seen that gross national oduct regularly runs several billion dollars a year ahead of national in-me. From this fact people have been known to conclude that business bitually returns to the public in the form of income less than it takes ɔm the public as proceeds from the sale of output. A little reflection will ɔw that the conclusion does not hold. For the entire gross national ɔduct does not have to be bought out of the national income. The excess

Figure 4 **GROSS AND NET NATIONAL PRODUCT, AND NATIONAL INCOME, 1946**



of gross national product over the national income consists of two items: depreciation and business taxes. It is true that the prices of consumers' goods (which are purchased out of income) include allowances for depreciation and business taxes, but these amounts are soon, if indirectly, paid out again as income. This is because sums set aside for depreciation are used to purchase capital goods for replacement, and so become income to the providers of factors of production employed in making capital goods. In similar fashion, business taxes are used by government to finance its operations, and so become income to government employees or contractors.

By an examination of Fig. 4 the same point may be seen from a slightly different angle. The only portion of gross national product (column A) purchased directly by consumers out of their incomes consists of consumer goods and services (column G). The remainder of gross national product (column A) is sold either to government or to other enterprises. A portion of the funds to finance the purchase of this remainder does indeed come indirectly from the consumer in the form of savings and income taxes (column G); other funds come from taxes paid by business (column F) and depreciation (column B).

Thus we may say: (1) proceeds from the sale by business to the public of finished goods and services furnish the funds out of which incomes are paid by business to the public; (2) the incomes received by the public from business enable the public to purchase the finished goods and services produced by business. The flow of money associated with the production and consumption of wealth is therefore circular in character, from the public to business and back again to the public. The path which money takes as it percolates through the business system, from its receipt as sale proceeds to its disbursement as income to some individual, may obviously be quite complicated. For instance, suppose a consumer buys a watch from a retailer. Part of the proceeds will go for the retailer's expenses (e.g., wages and rent), and part will be paid to a wholesaler. A portion of this sum will be paid by the wholesaler to a manufacturer of watches, and a portion of this again will be paid for raw materials, in this case to metallurgical firms and metal-mining companies. At each stage in the proceedings a portion of the original sum is split off and distributed to income receivers, and the remainder is used to make purchases from other enterprises. Eventually, if we follow the chain of transactions far enough, the whole of it will become wages, salaries, interest, rents or profits.

Looked at from the point of view of any single individual the matter can be put more simply. Money which he receives from the economic system as an employee, independent producer, or owner of property, he

ordinarily will return to the system as one of its customers. The same money may be distributed to him all over again in a later period of time. Clearly the events which we are describing have all the elements of a self-sustaining process. Whether the generation of incomes is in fact always fully self-sustaining is a question which we shall discuss more fully in Chapter 9 and again in Chapter 30.

We can summarize the argument to this point by reflecting as follows. The closeness of the connection between the operation of the productive process and the getting and spending of money incomes led us into a discussion both of national product and of national income. It is, in fact, precisely the closeness of this connection which enabled us to appreciate the identity between net national product (measured at factor prices) on the one hand and national income on the other. The former represents the aggregate of goods and services which the people of the country obtain as a result of their economic activity. The latter is simply a composite account of the cost in money of producing such goods and services, i.e., the total amount of money earned by the community in the course of its economic activity. The two amounts are always equal, moment by moment, for the sums expended by the public for commodities and services, i.e., their aggregate money value, represent just so much income for someone, whether wage earner, businessman, stockholder or bondholder, involved in their production and distribution. Net national product and national income are therefore two different ways of looking at one and the same thing.

CONSUMPTION, SAVING, AND INVESTMENT

Of course it could happen during some particular year that the whole of the national income (except for income taxes) was spent for consumption purposes; or—which is the same thing—that the year's net national product consisted (apart from government output) entirely of consumers' goods and services. This would be a highly unusual occurrence. Practically never does the public spend for consumption just so much as it has left over after payment of income taxes. Usually the community consumes less than its income, i.e., it saves. Occasionally, for brief periods, the public collectively spends more than it earns, i.e., it dissaves.

Saving is the counterpart of net investment, described above. Unless the community spends for consumption a smaller sum than its total earnings, there is no way in which the output of capital goods can exceed the amount needed for replacement purposes. That is to say, there is no way in which net additions can be made to the existing stock of capital goods

Suppose, on the contrary, the community spends more than it earns. That is just another way of saying that the current output of capital goods (gross investment) is insufficient to make good the current depreciation of the existing stock of capital. Failure to replace capital goods consumed is rare and has occurred in the United States for brief periods only. It has happened when the economy was operating at such a low level that replacement did not seem worth while or could readily be postponed. For a few years during the Great Depression of the 1930's the existence of idle equipment encouraged so much postponement of replacement that, as we saw in Chapter 6, the stock of capital actually declined. And the stock of capital has also declined in wartime; the economy was operating at a very high level, but resources to make replacements could not be spared from more urgent tasks. Thus for several years during World War II the nation did not fully replace worn-out capital; wherever possible replacement was postponed in favor of munitions output. Failure to replace worn-out capital is so exceptional that we may safely concentrate upon the normal case in which net investment—and saving—are positive quantities.

HOW SAVINGS ARE INVESTED

The community's behavior is the aggregate result of individual decisions. One income receiver may save by burying coin in the back yard. Yet such a practice would not be typical of savers at large. It is more convenient, and sufficiently accurate for present purposes, if we think of savers as lending their savings to enterprises in need of funds. Which enterprises are in need of funds? Businesses purchasing materials replenish their cash resources through the sale of their output. Businesses purchasing equipment for replacement finance such transactions also from the sale of output—in this case through the medium of depreciation reserves. Neither type of transaction requires any fresh financing. With businesses which purchase new, additional capital instruments matters stand otherwise. Such enterprises have expanding capital requirements and need additional funds not obtainable from the sale of output.[1] These are the businesses which stand in need of funds, and it is to them that income receivers lend their savings.

In practice the transaction whereby individual savers transfer their savings to enterprises with expanding capital requirements may be a very com-

[1] The finance of new capital requirements by a business out of its profits affords no real exception to this statement. Although in such a case the funds come indirectly from the sale of output, their immediate source consists of saving performed by the enterprise on behalf of its proprietors. Saving by enterprises is discussed further below.

plex one. It may involve the participation of a variety of financial institutions—stock and investment houses, savings banks, and even insurance companies. But its essential features are relatively simple. We shall be close enough to reality if we think of accumulated savings as lent by the savers to those enterprises which purchase capital goods over and above their replacement needs.

There are times when government output is financed entirely by taxation. At such times new investment by business enterprises absorbs the whole of the public's current saving. However, it is a practice of long standing for local government units to pay for public improvements out of borrowed funds. Moreover, for reasons which will be discussed more fully in a later chapter, the federal government has within recent years borrowed large sums to finance its operations. Whenever government agencies as a group (federal, state and local) spend more than they raise in taxes, the balance is obtained from the public's savings.

Let us now summarize these ideas. Earlier in this chapter we presented a consolidated income account for the nation as a whole in the form: net national product at market prices = national income + business taxes. This, being interpreted, means "the sums generated through the production of the net national product go to make up the national income and to pay business taxes." The identity is in fact a shorthand description of the manner in which the nation earns its income, and is illustrated in Table 6 above.

The spending or disposition of the national income, once it is earned, together with business tax revenues can be described by a similar identity:

National income + Business taxes = Consumption + Saving + All taxes

= Consumption + Net investment + Government purchases of goods and services

= Net national product at market prices

This, being interpreted, means "the sums devoted to consumption are used to purchase that part of the net national product composed of consumer goods, and the sums saved, or paid in taxes, are together used to purchase that part of the net national product composed of capital goods over and above replacement needs, together with that part composed of government purchases of goods and services." This identity is illustrated numerically in

Table 7 USE MADE OF NATIONAL INCOME, AND ITS RELATION TO NET NATIONAL PRODUCT, 1946

(in billions of dollars)

Consumption		143.7	Consumption	143.7
Durable goods	14.9		Net investment	18.3
Nondurable goods	87.1		Gross investment 29.4	
Services	41.7		*less* Depreciation 11.1	
Savings		16.4	Government purchases of goods and services	30.6
Income taxes *		18.1		
National income		**178.2**		
Business taxes		14.4		
Net national product at market prices		**192.6**	Net national product at market prices	**192.6**

* Strictly, income taxes (individual and corporate) minus government transfer payments (e.g. interest on the debt). These payments have to be deducted because they are not included in government output (purchases of goods and services) on the right-hand side of the table. Transfer payments are explained below.

We may summarize what the public did with its income in 1946. Of a total of about $178,000,000,000 slightly more than a tenth went for income taxes, slightly less than a tenth was saved, and four-fifths was used for consumption. Consumer spending was divided rather unequally among durable goods (e.g., automobiles and radios), nondurable goods (e.g., food and clothing) and services (e.g., house rent, transportation, medical attention, movies). A more detailed account of the composition of consumption will be found in Chapter 17.

SOME ACCOUNTING COMPLEXITIES

Already the ideas involved in the treatment of national income and product seem rather complicated. Yet in the preceding discussion we have made the matter appear simpler in several respects than it actually is. We deliberately glossed over a number of difficulties, and made several statements which (the reader may have noticed) call, if not for modification, at least for elaboration. Some of these further complications we must now consider.

In constructing the above framework, we have chosen to regard transactions involving the earning and spending of income as occurring between

"the public" on the one hand and "business" on the other. When the enterprises which produce goods and generate incomes are corporations and possess independent legal existence, no qualification is necessary. In the real world, not everyone receives income in the form of a payroll, interest or dividend check from a corporation. We have to show that the above concepts are appropriate, even where businesses are not incorporated and where persons are self-employed.

All we need to do, in order to bring our storekeeper or our professional practitioner into the picture, is to split his economic personality into two parts. He has his business, in which he buys and sells goods and services, and into which he puts his own labor in return for profit or professional income. And he has his personal accounts, like any other individual, in which he records income received from his business, and the amounts of his expenditures and savings from this income. There is therefore no contradiction in principle if we assume (as we did above) that all goods and services composing the national product are produced by business enterprises (or by government), and that all incomes are received by individuals from business enterprises (or from government).

IMPUTED INCOME

We tend to think of income as received in the form of money, yet many commodities and services never are exchanged against money. For instance, the productive efforts of farmers result partly in cash income and partly in commodities which are consumed by farm families. The fact that farmers or their families consume some of their produce instead of selling it does not affect its character as income. The value of such produce is, therefore, included in most calculations, such as those made by the United States Department of Commerce (quoted here), both for national income and for net national product. Such noncash items are called "imputed" income.

Again, the annual rental value of homes occupied by their owners is really a part of the owners' incomes. No one will dispute that the cash income received by the owner of a rented house should be included in national income. Why should the accident of ownership decide whether or not a home contributes services to the national product? Most compilers of income statistics, including the Department of Commerce, have concluded that ownership is irrelevant in this connection. Therefore we include in national income the imputed rental value of homes occupied by their

owners, and in national product the imputed value of the shelter that the homeowner consumes.

If homes are to be regarded as a form of capital, producing services for their occupiers and yielding income to their owners (even when owners and occupiers are the same), why should not other forms of durable consumer goods—automobiles or refrigerators, let us say—receive the same treatment? In truth, such durable goods in the hands of consumers are frequently classed by textbooks on economics as "consumers' capital." Such goods yield a flow of valuable services to their owners. But whatever theoretical categories we might choose to establish in the present context the practical problem of measurement is decisive. There would be no way of valuing the services of durable goods in the hands of consumers, if we wished to regard these services as a form of income. Therefore these services have been excluded from all national-income estimates so far compiled. The values of durable consumer goods are included in the statistical total of consumption in the year in which they are purchased.

INTERNATIONAL PAYMENTS

Some income is earned in producing for export; and certain constituents of the national product come from overseas, or are manufactured from imported materials. If it were true in every period of time that "exports pay for imports," i.e., if the value of the nation's exports always equaled the value of its imports, the existence of international transactions would offer no additional complication. The identity of national income and net national product, established above, would still hold. But in fact there is no necessary equality between the value of a nation's exports and the value of its imports over any particular period of time.

Proceeds from the sale of exports are automatically included in the national income total, since the goods exported are produced by American enterprises. Likewise, the value of imports is counted as part of the national product, since the consumers' goods imported are sold to American consumers, and the capital goods to American firms. The remaining components of the international balance are not automatically included, but require separate consideration.

National income is the aggregate income of residents of the United States. To the total of incomes earned from the productive activities of American enterprises, we must plainly add income received from abroad and deduct income paid to foreigners. We add into the total such items as, for example, dividends received by residents of this country upon the stock

of Canadian corporations; and we deduct such items as royalties paid by American publishers to foreign authors.

In the same manner, capital transactions between Americans and foreigners affect the national-product totals. Net national product was defined as the sum of consumer goods and services plus the increment to capital. The latter, called net investment, we proposed to measure as the excess of the output of capital goods over and above the amount needed for replacement purposes. If, however, international capital movements occur, this procedure is inadequate, for the amount of capital owned by residents of the United States will change, not only through an increment (or decrement) to the domestic stock of capital goods, but also through any variation in net claims by American residents against foreigners and vice versa. In computing both gross and net investment as a component of gross and net national product in any year we must, therefore, add sums lent to foreigners and deduct sums borrowed from foreigners.

COMPOSITION OF INVESTMENT

In the discussion earlier in this chapter we evidently took too simple a view of investment. It has just been shown that we must take account of changes in claims against foreigners. To complete the picture, we have to allow for changes in the inventories of raw materials, work in process, and finished goods in the hands of business enterprises.

The composition of the $18,300,000,000 of net investment previously reported for 1946 is shown in Table 8. The total for gross investment in Tables 5 to 7 ($29,400,000,000) consists of the items shown in Table 8 without deduction for depreciation of equipment and structures.

Among individual components of investment the net increase in business inventories ($3,700,000,000) was unusually large in 1946, and probably reflects a restocking of many businesses for peacetime operation. The net increase in claims against foreigners ($4,800,000,000) was also exceptionally large. The total was made up of $3,200,000,000 of overseas loans by the United States Treasury or other federal agencies and $1,600,000,000 net foreign investment on private account. The latter consisted almost entirely of a reduction in short-term dollar balances held by foreigners for the purchase of American exports. These balances were held by foreigners as deposits in American banks. The result of their expenditure for exports from this country was of course to *diminish* the claims of foreigners against the United States. This amounts, in international accounting, to a net *increase* in the claims of Americans against foreigners.

Table 8 **COMPOSITION OF NET INVESTMENT, 1946**

(in billions of dollars)

Gross investment in equipment and structures		20.9
Consisting of:		
Capital equipment	12.4	
Residential construction	3.4	
Other construction	5.1	
Less Depreciation of equipment and structures		*11.1*
Leaving Net investment in equipment and structures		**9.8**
Net increase in business inventories		3.7
Net increase in claims against foreigners		4.8
By the United States government	3.2	
By private business	1.6	
Total net investment (as in Tables 6 and 7 above)		**18.3**

Evidently net investment represents the value of the addition to equipment, structures, inventories and claims against foreigners which occurred during the year. Does the statement mean that the nation's wealth increased by $18,300,000,000 during 1946? Before we could answer in the affirmative, several qualifications would have to be made.

1. As we have seen, the figure does not include domestic capital expenditures by government agencies (i.e., public investment within the United States).

2. The figure of $3,200,000,000 for foreign investment on government account during 1946 includes relief expenditures abroad and other "unrequited exports," as well as loans which are contractually repayable. Consequently the figure overstates the net increase in claims against foreigners on government account. Included are several installments of the loan to Britain. (The Marshall Plan was of course not yet in operation.)

3. As already noted, the calculation makes no allowance for changes in the stock of durable goods (except homes) owned by individuals.

4. Changes may occur in the value of existing assets. Insofar as equipment depreciates through use, the change in value of existing assets is deducted when we convert gross investment to net. But the value of a nation's stock of capital changes for all sorts of other reasons; for instance, monetary inflation (or deflation) may lead to a general rise (or fall) in the cost of reproducing equipment, and, therefore, also in the value of existing equipment. All that data for investment seek to measure is the value of the

increment to the stock of capital goods (and claims against foreigners). Changes in the value of this stock due to inflation or deflation, or to other causes, obviously are not included in the value of this increment. Even the value of the increment is measured imperfectly, as we have seen.

NATIONAL INCOME VS. PERSONAL INCOME

To this point we have implied that the income of a nation is the sum of the incomes of the individuals composing it. Undoubtedly this is a convenient way to think about the matter, but it is not wholly accurate. The two most important qualifications relate to saving by corporate enterprises and transfer payments.

Saving by enterprises. As we have seen, some part of the sales proceeds of the output of the economic system accrues, in the form of profits, to corporate enterprises rather than to individuals. Of course, such profits may be, as we have assumed they will be, distributed to stockholders as dividends. There is, however, no necessary equivalence between the amounts earned by corporate enterprises and the amounts distributed by them to stockholders. Conservatively managed businesses commonly pay out in dividends somewhat less than they actually earn during the course of the year, adding the remainder to reserve, i.e., saving it. Such business savings are just as much additions to the supply of investible funds as are the savings of individuals. And in years when profits decline or losses are suffered, it is by no means unusual for corporations to pay, out of reserves or even out of working capital, dividends which exceed their current earnings. Such excess amounts of income distributed over income earned have sometimes been called "negative business savings."

Consequently, the national income is only identical with the sum of individuals' incomes, if we count each stockholder's income as his share in the earnings of the corporation, rather than the amount of dividends actually paid out to him in cash. Put otherwise, measurement of the national income requires that we add up everybody's cash income, and then insert a further item representing the aggregate positive or negative savings of business corporations.

Transfer payments. Not all of the money that people receive is income in the sense of the present discussion. Clearly gifts, legacies, and proceeds from the sale of property are not income in any sense of the term. Even the individual who receives them does not think of such receipts as a form of income, mainly perhaps because of the irregularity of their occurrence.

In computing the national income we also exclude them, but for a different reason: because they are not paid in return for any service to production. We want the national income to measure the net national product at factor prices, but it will do this accurately only if we include all payments made in return for services to production, and exclude all other payments.

Such items, which we wish to exclude, are called "transfer payments." Some of them would, indeed, be considered income by the recipients. An example is interest received by owners of government bonds. Except where the obligations are tax-exempt, interest on the public debt is regarded by the federal Bureau of Internal Revenue as a form of income that is subject to taxation. Sometimes such interest is paid in return for a productive service and sometimes not. Where the obligation was incurred to finance a publicly owned enterprise—for example, a municipal power plant—the interest represents the productive services of a capital instrument, and the amount paid is appropriately included in the national income. Just as we include interest on corporate bonds because it represents earnings of equipment purchased out of the proceeds of the bond issue, so we include interest on government bonds where the bonds represent productive assets. Not so in the case of the deadweight debt, i.e., debt which was incurred to meet the operating expenses of government. Such debt is matched by no physical asset, and the interest payments measure no service to production. Most of the federal debt, incurred to finance World War II, is in this category. Most of the interest paid by the federal government therefore consists of transfer payments, and is excluded from the national income. Relief payments (other than work relief) are in the same position and are likewise excluded.

Personal income in 1946. In 1946 personal income, or "income distributed to individuals" as it is sometimes called, was slightly less than national income. The relationship is shown in Table 9, which summarizes the preceding discussion.

Table 9 NATIONAL AND PERSONAL INCOME, 1946

(in billions of dollars)

National income		178.2
less Corporate savings		10.8
plus Transfer payments		9.8
Interest on public debt	4.5	
Other	5.3	
Personal income		177.2

HOW THE FIGURES ARE ASSEMBLED

The statistics of gross national product and of national income for 1946 given in this chapter, and the figures for other years given in the next chapter, were assembled by the Department of Commerce from a wide variety of sources. A brief account of the methods followed seems in point. The most important sources are the censuses of agriculture, mining, manufacturing and construction, which are taken in conjunction with the decennial census of population and also in other years in which no population count is made. From these sources, both value of product and wages and salaries paid can be obtained. Data for other industries can be extracted from the censuses of wholesale and retail distribution, of electrical industries and of service establishments, taken at irregular intervals. Railroad, trucking, and pipe-line companies report annually to the Interstate Commerce Commission. Profits earned and interest paid by corporations in all industries are determined by the United States Bureau of Internal Revenue as a by-product of the assessment of corporate income taxes and are published annually in the *Statistics of Income*. The statistical sources listed above include only the more important ones used in estimating gross national product and national income. Other statistics are collected by state governments, trade associations, and private research organizations. Sometimes special field surveys are made to supplement existing sources. Frequently the information from one source can be used to check the accuracy of figures from other sources.

Despite the wealth of information available concerning the activities of the American economy, a great deal of guesswork is still necessary in compiling such figures as those shown in Tables 5 to 9 and Fig. 4. For instance, in some industries wages and salaries have to be estimated by multiplying average rates of wages by the estimated number of persons employed; the latter figure may be derived from the population census or in other ways. Again, the profits of unincorporated enterprises always present a difficult problem to the statistician. The sales proceeds of such businesses can often be measured from census sources, and their profits estimated by using ratios derived from corporate experience. But this is at best a rough and ready procedure. It might be thought that Bureau of Internal Revenue reports of incomes declared by people filling out income-tax returns could provide a check upon the total figure for wages, salaries and profits of individuals and partnerships. Unfortunately, however, the incomes of so many wage earners still fall below the exemption limit that this test cannot be applied.

Figures for national income and product are continually revised and brought up-to-date by the United States Department of Commerce. The latest estimates are published from time to time in the *Survey of Current Business* and in the *Federal Reserve Bulletin*, and are reproduced in the financial pages of the daily press.

CHAPTER EIGHT

Our national income and its distribution

DETERMINANTS OF THE SIZE OF INCOME

Our object in developing the concepts of national product and income in this book is twofold: to systematize our thinking about important economic processes, and to provide a framework for measuring the over-all behavior of the economic system. Chapter 7 was mainly concerned with the first purpose. We studied the processes of economic activity as reflected in the generation of incomes and in the consumption and investment of wealth.

This chapter will be concerned with the second objective. We shall seek to measure the results of economic activity in the United States within recent times, as these results are reflected in the size and distribution of the economic product. We shall find that national income statistics answer a wide variety of questions, and also raise a number of problems.

As the embodiment of the practical results of economic endeavor, the national income or net national product furnishes the most comprehensive measure which we possess, both of the economic welfare of the community, and also of the efficiency with which the community makes use of the resources, human and material, at its disposal. These two concepts—welfare and efficiency—are aspects of a single idea. The more efficiently a society conducts its economic affairs, the greater will be the welfare of its members. The material conditions in which any society lives are determined by two circumstances: (1) the amounts of goods currently produced; and (2) the way in which these goods are distributed among the members of the community. Both of these will receive attention in the present chapter. We shall study the flow of goods and services in the aggregate by observing the size and composition of the national income. And we shall study their dis-

tribution among the members of the community by observing the sizes of incomes received by families and single individuals.

Of course, the extent to which a nation is *able* to satisfy the economic needs of its citizens depends directly upon the efficiency with which it uses its resources—upon the efficiency, in the widest sense, of its economic system. This efficiency depends, for any given nation, upon two broad sets of circumstances. The first consists of techniques of production, the availability of raw materials, the opportunities for foreign commerce, the native skills and degree of education of the inhabitants. Mainly because of progress in the productive arts, the volume of goods and services produced in the United States per capita of population has shown an upward trend for over a century, possibly indeed since the very first settlements on this continent.

The second set of circumstances includes those governing the extent to which currently available resources are utilized. The proportion of the available labor force actually employed, the degree to which capital equipment is steadily in use, are of vital importance. They may conveniently be summarized as the "level of economic activity," or—for an economic system consisting primarily of private business enterprise—as the "level of business activity." When our national income has declined, sometimes for several years at a time, as it did during the early 1930's, lowered production has not been due to a loss of workers' skill, to exhaustion of resources, or to diminished benefits from foreign commerce. Lessened output has resulted upon such occasions from a fall in the number of people at work and from diminished utilization of capital equipment and other resources—in a word, from a decline in the level of business activity. The alternations between periods of prosperity and depression to which our economy is subject will be discussed in Chapter 9.

THE SIZE OF THE NATIONAL INCOME

We have seen in the preceding chapter that the national income, or net national product at factor prices, of the United States in the year 1946 was $178,000,000,000. The calculation which produced this estimate was essentially a form of national accounting. As a way of appraising the results of economic activity, such a dollar total must definitely be reckoned a second best. It is a substitute for the listing of the actual goods and services produced, and consumed or invested within the United States in the year 1946: so many loaves of bread, so many pairs of shoes, so many movie shows, so many of every item which the economic system brought forth. The sub-

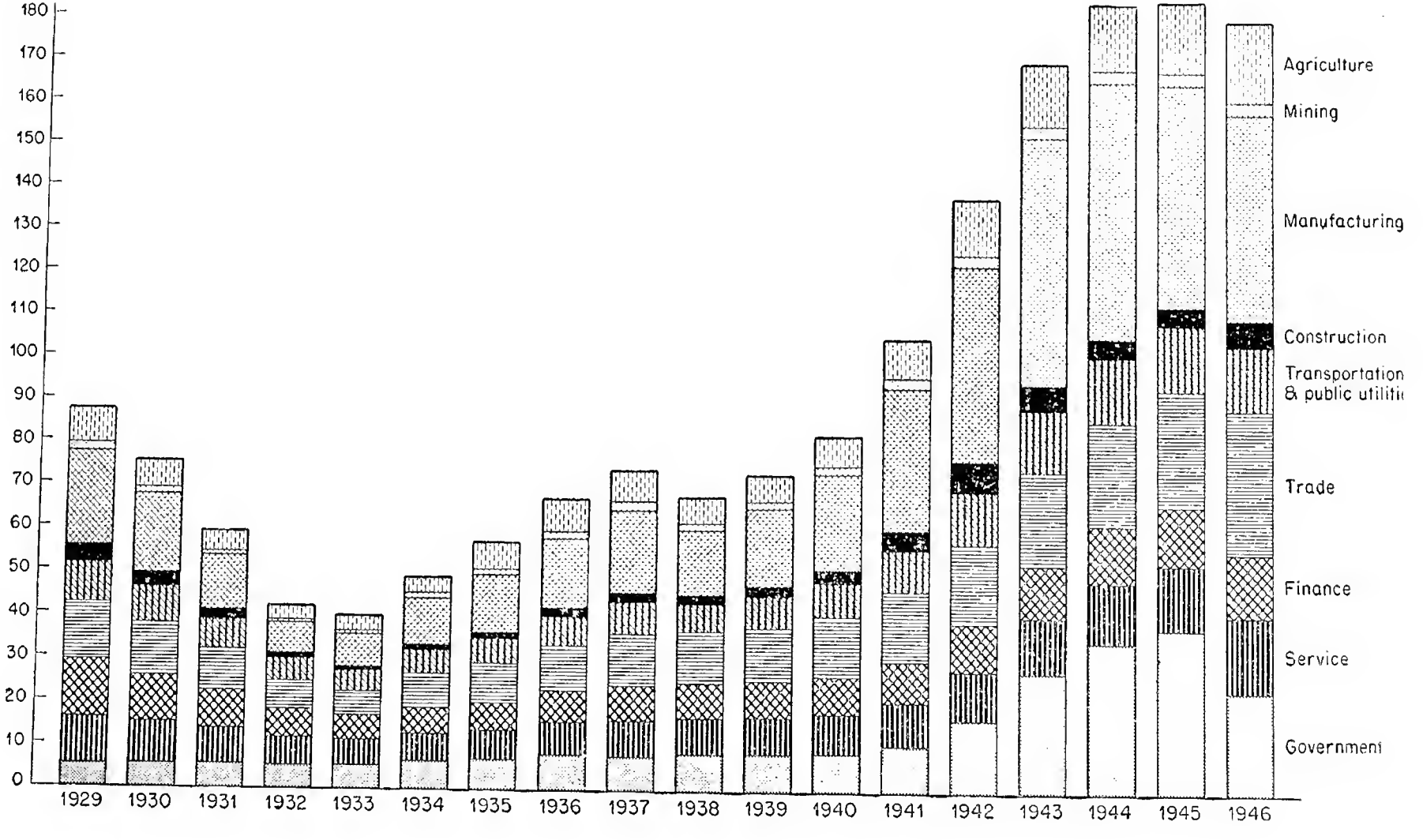
itute—the multi-billion dollar total just cited—has to be used because any tual listing of the goods and services which comprised the national income r ner national product in 1946 would run to thousands upon thousands of ifferent items, and for most purposes would be quite meaningless. Such a sting could be of no use for purposes of measurement, could afford no asis for comparing national income in 1946 with (say) national income in 939—unless, indeed, it were somehow summarized. But to summarize the ast array of goods and services implies their conversion into some common nit of account, such as their dollar value. This is, of course, precisely the ask performed by national income statistics.

In discussing national income there is, therefore, no escape from the use of the money measure. The dollar total which we grind out of the statistical machine and label the "national income for the year nineteen so-and-so" is the result of the working of the price system. Indeed, the money values of its various constituents—of the commodities and services which compose it—are nothing more than prices determined in some market place. The income shares which various groups of individuals are able to appropriate to themselves are in the same way the result of the prices which the market allows them to charge for their services to production. Indeed, an appeal is made to the judgment of the market even where some individual component of the total is not itself produced for sale. Farm products consumed on farms, for instance, are valued at what they might be expected to sell for, if sold; or at what they would have cost the farm consumer, had he needed to buy them. Again, government services are valued at what it costs the government to furnish them.

THE NATIONAL INCOME IN CURRENT DOLLARS

The dollar volume of the national income, year by year from 1929 to 1946, as estimated by the Department of Commerce is shown in Fig. 5. The decline in national income from 1929 to 1933, its recovery through 1937, the recession of 1938, and the subsequent vast expansion during World War II, are clearly visible. From $87,000,000,000 in 1929 it fell to $40,000,000,000 in 1933, rose to around $70,000,000,000 in 1937 and 1939, and reached the unprecedented level of $180,000,000,000 in 1944 and 1945. To estimate the true importance of these figures, changes in the purchasing power of the dollar must be taken into consideration. Such changes we shall now consider.

The figures so far given in this and the preceding chapter are expressed in what are called "current dollars," i.e., the actual dollar values recorded


180
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Agriculture
Mining
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Trade
Finance
Service
Government

for the year in question. However, as we have all been driven to realize recently, the purchasing power of the dollar is far from stable; it often varies sharply from one year to another. One dollar or a billion dollars in 1948 would not buy the same quantity of goods as one dollar or a billion dollars in 1939.

REAL NATIONAL INCOME

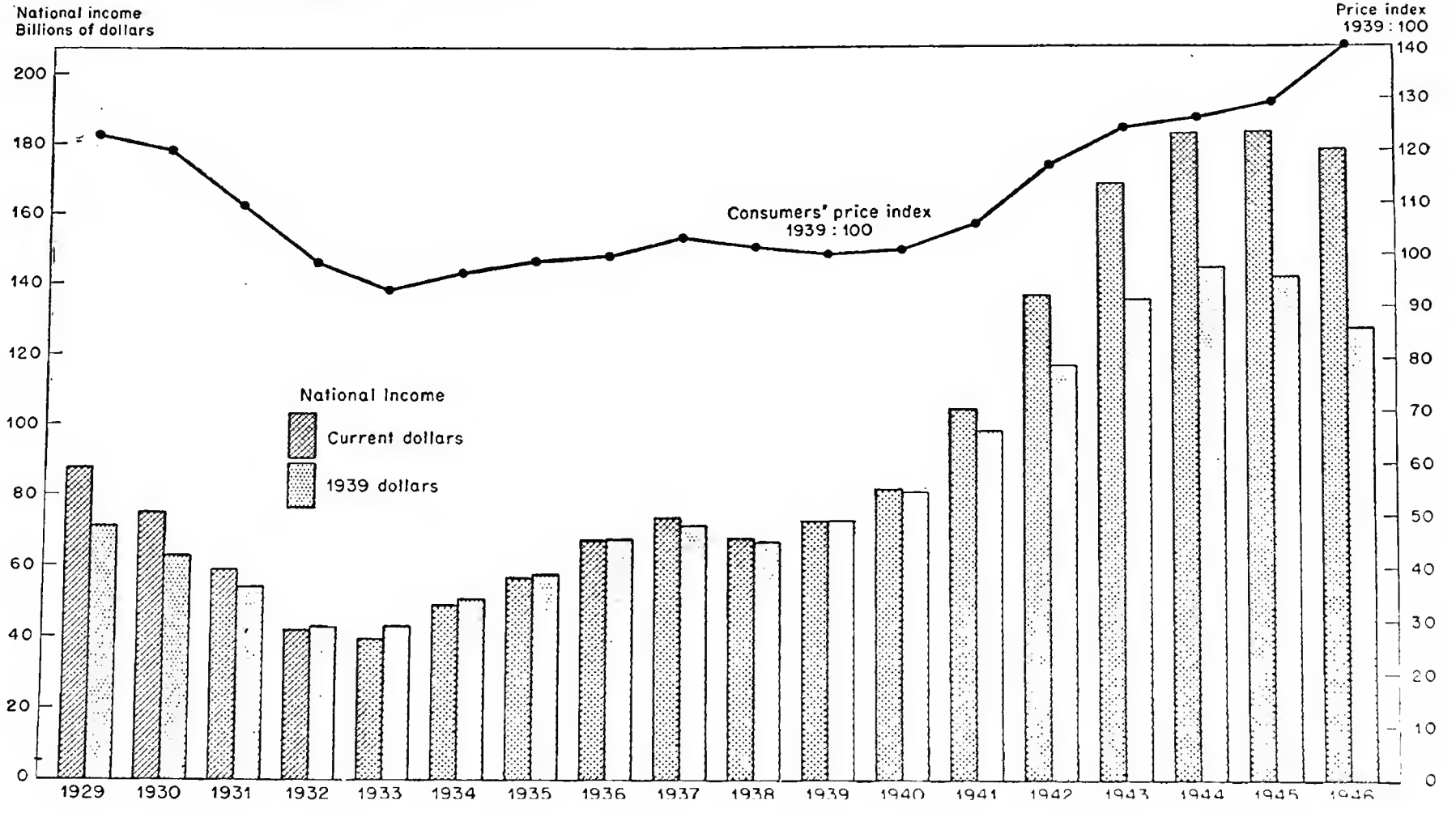
Measuring values with a dollar that is "bigger" at one time and "smaller" at another is like measuring distance with a yardstick that alternately stretches and shrinks. Obviously, to compare the actual amounts of goods composing the national income in any one year with the amounts in any other year, we must make allowance for changes in the purchasing power of the dollar. But changes in the buying power of the dollar are nothing more than variations in the level of prices in general. If all prices double, a dollar will buy half as much as it did previously: if prices are cut in two, a dollar will buy twice as much as formerly. The following calculation is based upon the consumers' price (cost-of-living) index of the United States Bureau of Labor Statistics. The composite price of goods and services bought by consumers in 1939 is assigned a value of 100, and the level of the same composite price in other years is shown as a relative of 100. Thus the composite price of a collection of goods and services costing $100 in 1939 was $140 in 1946. That is to say, in 1946 it cost on the average $1.40 or thereabouts to buy what could have been bought for a dollar in 1939. Plainly the dollar had shrunk, if not physically, at least in buying power.

To convert the national income measured in "current dollars" to a "constant dollar" basis, we need arbitrarily to select a year the purchasing power of whose dollars we shall use for measuring the value of goods in other years. In Table 10 and Fig. 6, the national income is expressed first in current dollars and then in "1939 dollars." Of course, for 1939 the two totals are the same. But for other years we have to perform a calculation

Table 10 **REAL NATIONAL INCOME**

	Notional income current dollars (billions)	*Consumers price index (1939 = 100)*	*National income 1939 dollars (billions)*
1929	87.4	123.2	70.9
1933	39.6	93.0	42.6
1939	72.5	100.0	72.5
1946	178.2	140.1	127.2

Figure 6 **MONEY INCOME AND REAL INCOME: NATIONAL INCOME, CURRENT AND 1939 DOLLARS, 1929-1946**



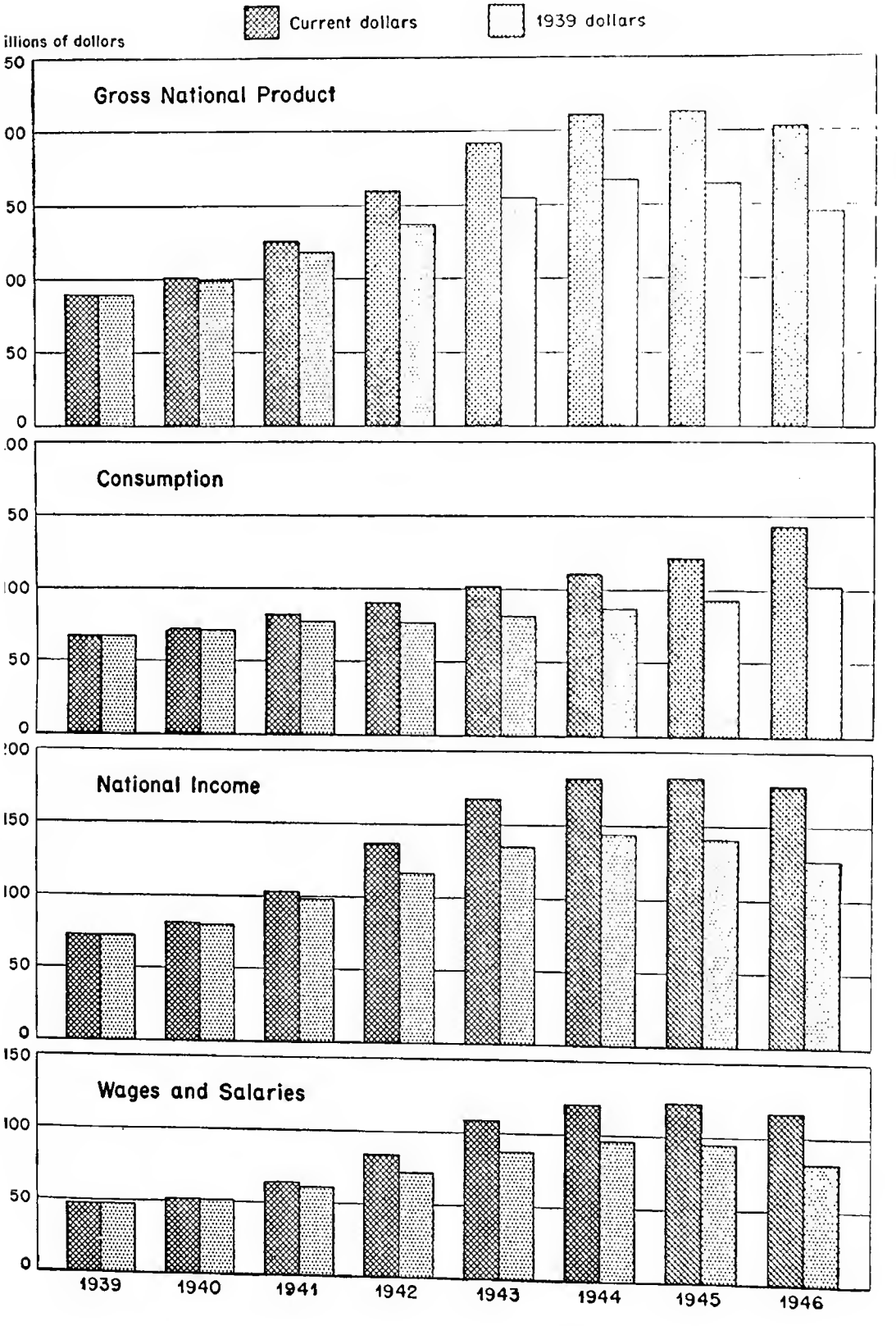
in order to convert totals in current dollars to totals in 1939 dollars. The national income in current dollars was, for instance, $178,200,000,000 in 1946. If we divide by 140.1 and multiply by 100, we find that the 1946 national income *measured in 1939 dollars* was only $127,200,000,000. And similarly for other years. The figures for national income in 1939 dollars, calculated in this way, show what the actual goods and services produced in a given year would have sold for, if the buying power of the dollar in that year (as measured by the consumers' price index) had been the same as in 1939.

TRENDS OF INCOME AND PRODUCTION

Statisticians would say that we have "deflated" current-dollar totals (in Table 10, first column) to obtain constant-dollar totals (shown in the third column). The latter are reckoned in dollars of uniform purchasing power, and, therefore, measure the actual volume of goods and services of which the national income is made up, from one year to another, irrespective of any price changes which may have occurred during the interval. For example, between 1939 and 1946 national income in current dollars more than doubled; but a substantial part of the increase represented higher prices, so that the volume of goods and services produced increased by about four-fifths. Income expressed in constant dollars is sometimes called "real income," in contrast to "money income" or "pecuniary income," in order to concentrate attention upon the amount of goods and services which the income represents, as distinct from their money values. Even real income has to be measured in dollars, but the dollars we use for the purpose are of uniform size, so to speak.

Fig. 6 shows national income in current dollars (as in Fig. 5), the consumers' price index as a percentage of 1939, and national income in 1939 dollars. Evidently between 1932 and 1941 prices were comparatively stable, for in none of these years was the price index as much as 10 per cent above or below the 1939 level. As a consequence national income in current dollars and in 1939 dollars do not differ greatly for these years. On the other hand, prices prior to the onset of the Great Depression were much higher than during the 1930's. It is no surprise, therefore, that the 1929 and 1930 income totals are much greater when measured in current dollars than they are when measured in 1939 dollars. Again, in 1942 and later years prices were much higher than in 1939, so that income in current dollars rose far more than it did when measured in constant dollars.

Figure 7 **THE WORLD WAR II IN ATION: SELECTED ITEMS, CURRENT AND 1939 DOLLARS, 1939-1946**



The method of statistical deflation can, of course, be applied equally well to gross national product and its constituents as it can to national income. Some further results of correcting for price changes during and since World War II are shown in Fig. 7. The deflation has been carried out in each case by using the consumers' price index compiled by the Bureau of Labor Statistics. Thus, for example, the movement of wages and salaries in 1939 dollars shows for each year the aggregate amount of wages and salaries that would have given the recipients the same command over consumers' goods, supposing that prices had not risen above the 1939 level.

We should notice in passing that the concept of "real income" or "real national product" is not quite as unambiguous as the discussion of the preceding paragraphs implies. We have chosen to deflate national income with an index of the prices of consumers' goods. Two comments may be made. First, the price index takes no account of the fact that during 1943-45 many commodities were rationed or were completely unavailable, and that goods in wartime are often of a quality inferior to those available in peacetime. This means that the wartime increase in real product and real income shown by the bars labeled "1939 dollars" in Figs. 6 and 7 is somewhat exaggerated. Second, the use of a price index of *consumers' goods* means that we have expressed the various quantities in terms of a particular kind of 1939 dollar: a dollar with a fixed buying power over *consumers' goods*. For most purposes this makes sense. But questions can be asked which could only be answered by resort to deflation by another type of price index. For instance, suppose we wished to know, not what consumers' goods the aggregate wages and salaries paid would command, but instead, how many hours of labor employers as a group received in return for these wages and salaries. In that case, our "constant dollar" should be a dollar with a given buying power not over consumers' goods but over hours of labor, and we would need accordingly to perform the deflation with an index of average hourly earnings. The result would be somewhat similar, but not identical, to that shown in the lowest panel of Fig. 7.

SIGNIFICANCE OF MEASURES OF REAL NATIONAL INCOME

The real national income—i.e., national income measured in dollars of constant buying power—affords the most comprehensive measure we possess, both of the economic welfare of the community, and of the efficiency with which it uses resources. For this reason, economic historians have made great efforts to extend the calculation of national income backwards into the period of most rapid growth of the American economy during the nine-

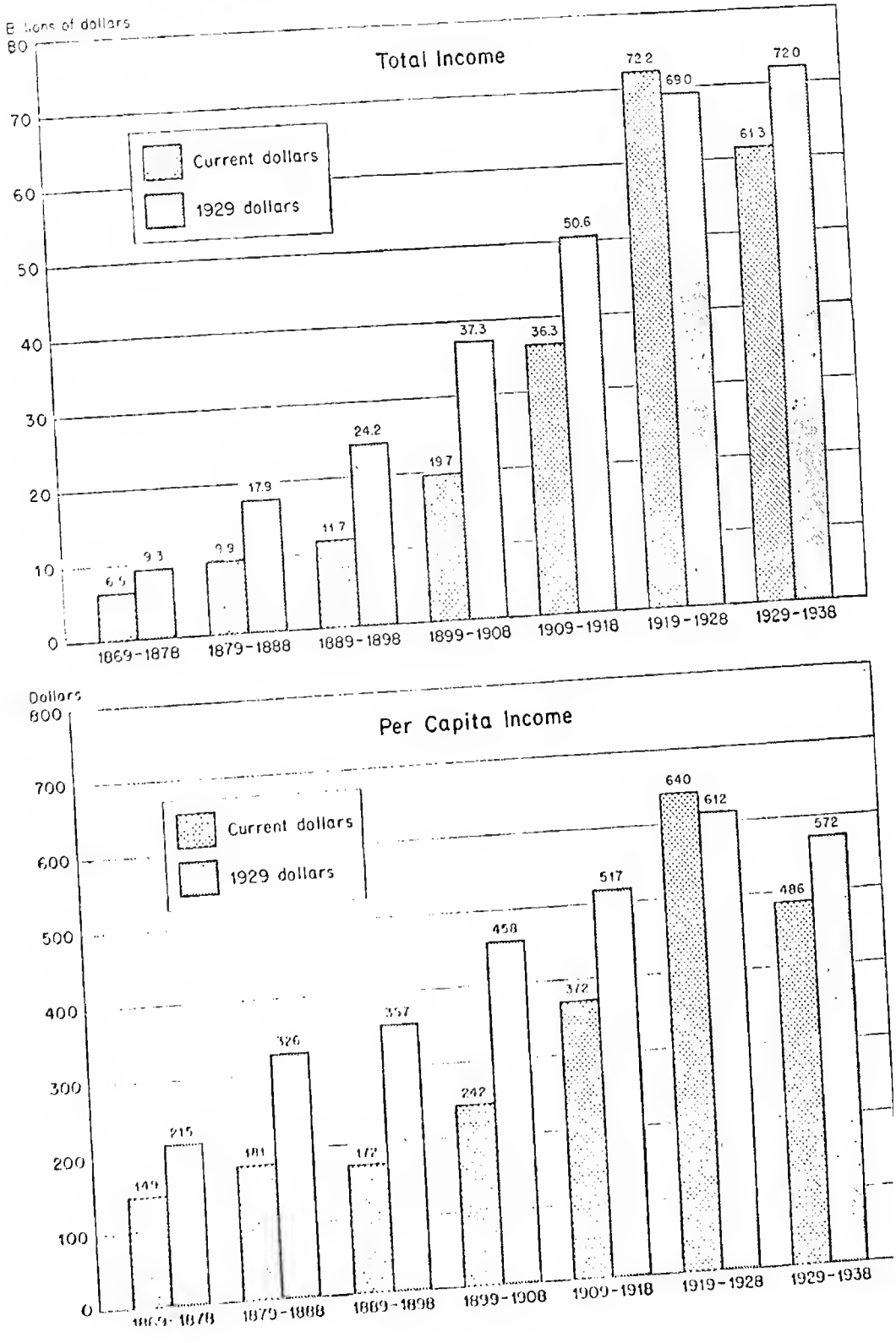
teenth century. The results of recent research in this direction by Simon Kuznets have been assembled in Fig. 8, which shows national income, or net national product at factor prices, over a period of seven decades. Because of defects in the early censuses of production, it is difficult to compile reliable figures for individual years prior to 1900. For this reason the data are shown in the form of annual averages for each decade.

National income is given both in current dollars and in dollars of 1929 purchasing power. The data in the upper half of Fig. 8 show annual average national income in billions of dollars, and are roughly comparable in scope to the material for recent years in Figs. 5 and 6. It will be seen that the net national product rose from under $10,000,000,000 a year during 1869-78 to about $70,000,000,000 a year during 1919-28. Thereafter, during the decade 1929-38, there was a sharp dip in average annual money income, and a leveling off in real income. The effects of the depression of the 1930's are clearly visible. The prolonged depression of the 1890's can also be observed in the failure of the bars for 1889-98 to come fully up to the level suggested by the trend.

NATIONAL INCOME AND INDIVIDUAL WELFARE

Just as movements of national income, when measured in current dollars, are influenced by and conceal variations in the buying power of the dollar, so the income totals, whether measured in current or constant dollars, are influenced by, and conceal, changes in the size of the community. During the decade 1869-78 the population of the United States was less than fifty million; during 1929-38 it had increased to about one hundred and twenty-five million. To allow for this increase, we can compute income upon a per capita basis, as shown in the lower half of Fig. 8. Real income per head of population rose (at 1929 prices) from $215 in 1869-78 to $612 during the decade 1919-28, and fell again slightly to $572 in 1929-38. The sixty-year increase in per capita real income was thus between two and three fold. It will be seen that real income, which depends upon the basic capabilities of the economic system and the extent to which they are utilized, rose more steadily or fluctuated less than did money income, subject to variation in the purchasing power of the dollar. For instance, between 1879-88 and 1889-98 the decline in price levels caused a slight fall in per capita money income, but this did not prevent a rise in per capita real income from the first decade to the second. Again, from 1909-18 to 1919-28 per capita money income almost doubled, but the rise in per capita real income was much more moderate.

Figure 8 NATIONAL INCOME, ANNUAL AVERAGES, BY DECADES, 1869-1938



If it be true that real national income per head of population was about two and one-half times as large during the 1930's as it had been during the 1870's, how much does this tell us concerning the economic welfare of the nation and the efficiency of its productive machine? The size of the flow of goods and services, measured by these figures, is certainly an important element in welfare. So is the distribution of this flow. Unfortunately we know almost nothing about the distribution of income between sections of the country, or between rich and poor, during the 1870's, so we cannot say whether distribution was more or less uneven in those days than it is today.

We can, however, list one improvement in economic welfare which is not reflected in Fig. 8—the reduction in hours of work. During the 1870's many wage earners worked more than ten hours a day. In 1890 average full-time hours in manufacturing were about sixty per week. By 1920 they had dropped to fifty, and during the 1930's average weekly hours in factories fell to forty. Comparable reductions occurred in other industries. An increase in leisure (unless it should be involuntary) contributes to welfare. We should notice, therefore, that welfare was advanced during the period both by a higher average real income, and by more leisure. And if we wish to judge the increase of leisure in relation to efficiency, we should observe that the increase in real income was achieved by the productive machine despite sharp reductions in working hours.

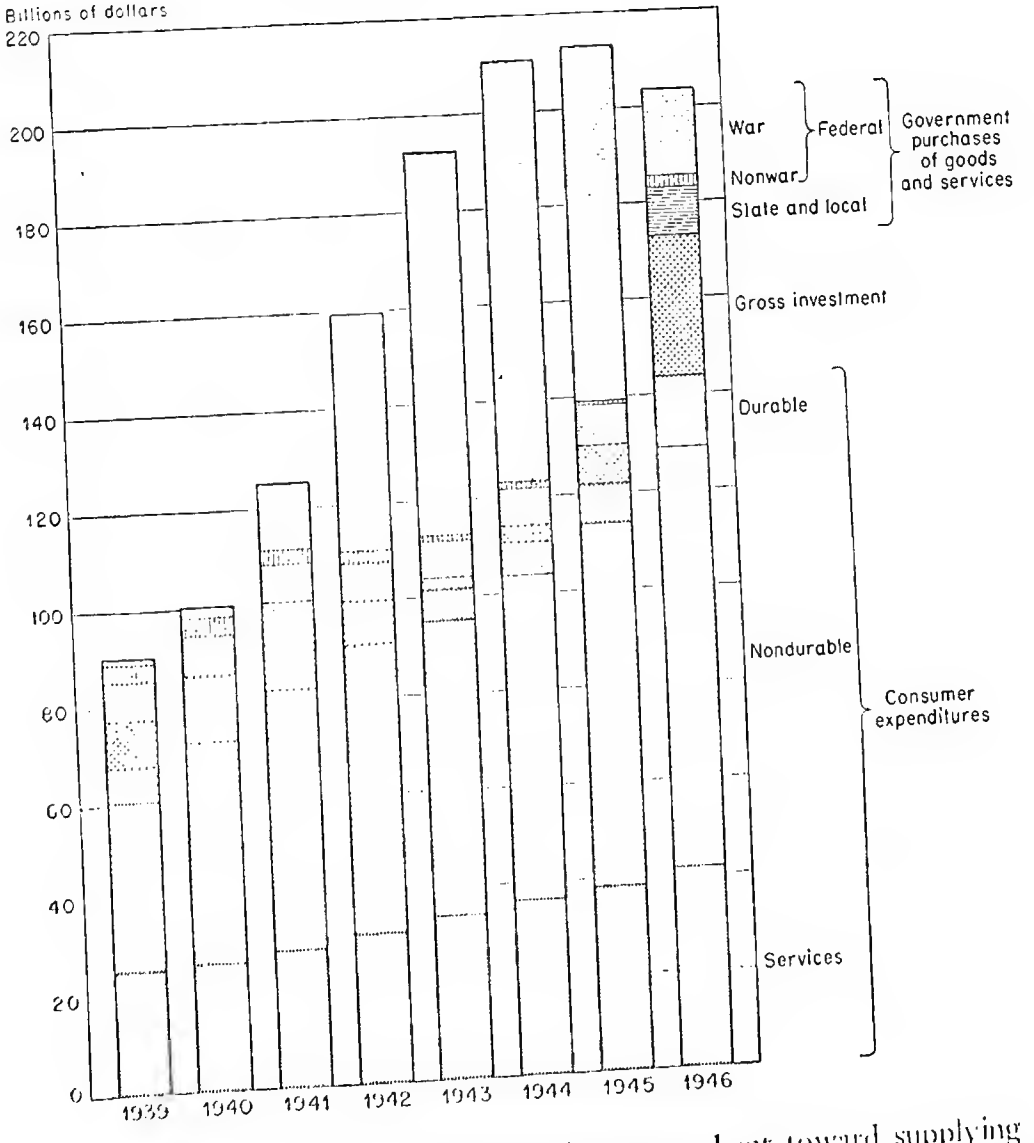
NATIONAL PRODUCT IN WORLD WAR II

The relations between gross national product and net national product or national income were explored in Chapter 7. It was indicated there that consumption, savings and income taxes go to make up national income or net national product at factor prices; and that, if to this sum are added depreciation and taxes paid by business, the result is gross national product (see Fig. 4, p. 160). It was further shown that gross national product can also be broken down into consumption and gross private investment, together with government purchases of goods and services (or government output). The latter classification enables us to observe most clearly the changes which have occurred in the composition of the product during and since World War II. The magnitudes in current dollars are set forth in Fig. 9.

Spending by consumers increased substantially from $67,000,000,000 in 1939 to $144,000,000,000 in 1946, or by more than 100 per cent. Part of this growth of course occurred before Pearl Harbor, and part since the close of hostilities. Much of the expansion reflects, as we have seen, the wartime

and postwar rise in prices: the physical volume of goods and services purchased by consumers, or real consumption, increased by 50 per cent (see Fig. 7). It is indeed remarkable that part of this expansion should have occurred at a time when the nation's efforts were bent toward supplying a vast army and navy, to say nothing of the needs of allies.

Figure 9 GROSS NATIONAL PRODUCT, BY TYPE OF PRODUCT, CURRENT DOLLARS, 1939-1946



Capital formation pursued an erratic course. Gross investment, consisting chiefly of capital instruments and new construction, rose from $10,000,000,000 in 1939 to $18,000,000,000 in 1941—the year of Pearl Harbor—and then declined as a consequence of wartime restrictions to around $3,[illegible] This decline reflects in part a reduc

tion of manufacturers', wholesalers', and retailers' inventories, a reduction partly caused by wartime restrictions on materials and partly by the activities of consumers who had more to spend in consequence of higher wartime earnings. Thus although consumer spending increased steadily from year to year, consumption plus gross investment—that is, total output available for private use—measured in current dollars declined after Pearl Harbor, as more and more resources were drawn into the war effort. Nonwar government spending varied little from year to year, so that total nonwar output also declined after 1941.

The most striking feature of Fig. 9 is, of course, the vast expansion in government expenditure for goods and services used in the conduct of the war. Whence did these goods and services come, and how were they financed?

GOVERNMENT'S WARTIME SHARE OF INCOME

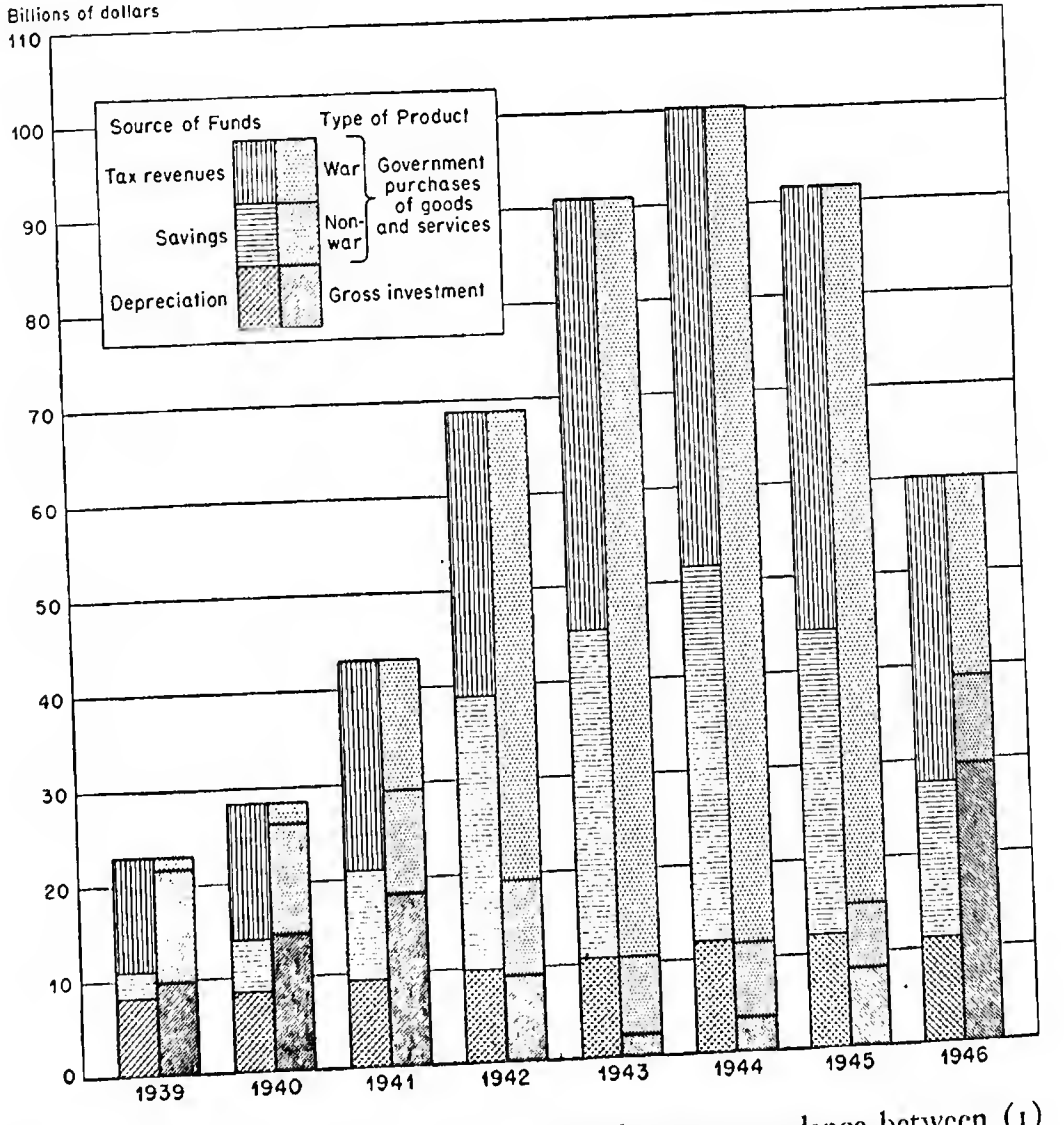
The sources of the vast wartime expansion of government output are disclosed in Fig. 10, which shows only components of gross national product other than consumers' commodities and services. The data from Fig. 9 for gross private investment and for government output (i.e., purchases of goods and services) are reproduced in the right-hand half of each column in Fig. 10. (The vertical scale has been doubled.) The left-hand half of each column shows the sources from which these two constituents of the product—gross capital formation and government output—were obtained.

In normal times business concerns finance gross investment from reserves for depreciation and from savings. As we saw in Chapter 7, the saving in question may be performed either by business enterprises themselves or by the public (i.e., by individual income receivers). In normal times, too, government expenditures are financed either by business taxes or by income taxes. Of course, even in peacetime, government agencies sometimes borrow for capital purposes, and so use up current savings to finance public investment. When this happens, not all current savings are available to finance private capital formation, for a portion is borrowed by government units for public purposes.

But if government expenditures exactly match tax revenues, gross private investment is equal to saving plus depreciation. In that case saving is equal to—and is exactly sufficient to finance—net private investment, or the net addition to the stock of capital goods and new construction paid for

characteristic of "normal times" was closely approached in 1939 and 1940, in which years saving plus depreciation differed from gross investment by less than $1,000,000,000, and nearly the whole of government output was

Figure 10 **SOURCES OF GROSS INVESTMENT AND GOVERNMENT OUTPUT, CURRENT DOLLARS, 1939-1946**



financed from taxation. In 1941 and 1946 the correspondence between (1) saving plus depreciation, and (2) gross investment, was also fairly close. During the war years 1942-45, however, the community's entire savings, and even a part of the reserves created by business for depreciation, were needed to furnish government output—mainly for war purposes.

WARTIME GROWTH OF GOVERNMENT DEBT

As the defense program got under way, annual purchases of goods and services by government rose from around $13,000,000,000 a year in 1939 and 1940 to $25,000,000,000 in 1941. After Pearl Harbor, government output—mainly for military purposes—jumped to $60,000,000,000 in 1942, $89,000,000,000 in 1943, and $97,000,000,000 in 1944. As hours of work lengthened and women entered industry, more was produced. Measured in current prices, the product rose still faster, for when war industry bid resources away from civilian uses prices and wages rose. Partly because of these developments, and partly because tax rates were raised, tax revenues jumped from around $12,000,000,000 a year—or almost as much as expenditures—in 1939 and 1940 to nearly $50,000,000,000 a year in 1943 and 1944. Tax revenues available to finance government output had quadrupled, yet government purchases of goods and services had grown sevenfold.[1] The gap was met by borrowing. Thanks to more and larger money incomes, to the bond-selling campaigns, and to the absence from the market of many types of consumers' goods, savings rose from $3,000,000,000 in 1939 to $40,000,000,000 in 1944.

Fig. 10 indicates that, in each of the four years 1942 through 1945, the government absorbed the whole of these savings in financing its wartime output. In addition, restrictions imposed on private investment, and physical inability to carry out replacement, prevented business from using the whole of its depreciation appropriations for the purchase of fresh equipment. These funds, too, were absorbed by the government for financing the war effort. To summarize, in the peak year of the war effort, 1944, to finance its output the government required the whole of its tax revenues, the whole of the community's savings, and a large part of the provision for depreciation made by business enterprises. Out of a gross national product in that year of $211,000,000,000 (current prices: see Fig. 9) less than $4,000,000,000 was claimed by business enterprises for replacement needs, and the remaining $207,000,000,000 was divided in almost exactly equal parts between civilian consumption and government output.

[1] Figures include state and local governments. As noted previously, tax revenues mentioned in the text and shown graphically are confined to those available to finance purchases of commodities and services; that is, are after deduction of government transfer payments (e.g., interest on dead-weight debt). Figures for the growth in tax revenues, without this deduction, are given in Chapter 24.

WAS WAR EXPENDITURE INFLATIONARY?

Figs. 9 and 10 show how the government was able to command the output it needed to fight the war, and indicate the sources from which its vast wartime purchases of goods and services were financed. There remains a vital question which at this point can be touched but briefly. Were these proceedings inflationary? We have seen that the public was induced to save around ten times as much as it did in peacetime. Such expanded savings, together with depreciation appropriations which business could not use for replacement, were evidently sufficient to cover the so-called inflationary gap between government expenditures and government tax revenues. This being the case, we are surely entitled to ask, how and why did inflation occur?

Frustrated by a scarcity of consumer goods, and exhorted by war bond salesmen, we saved $40,000,000,000 in 1944. Yet we cannot claim as virtue that we saved this vast amount out of a national money income no larger than prewar: $40,000,000,000 would have been more than half the $73,000,000,000 national income we earned in 1939. If the national income (current dollars) had been no larger in 1944 than it was in 1939, we surely never could or would have saved those forty billion dollars, or indeed anywhere near so much. In fact, the national income rose to $182,000,000,000 in 1944, so that, after saving $40,000,000,000 and paying $32,000,000,000 in income taxes, we still had $110,000,000,000 to spend for consumption. Even after these vast savings and increased taxes, we still were able to spend $43,000,000,000 *more* for consumer goods and services than we did in 1939. Our pride in having *saved* $40,000,000,000, or more than a fifth of our income that year, for the benefit of the war effort should be tempered by the knowledge that we were also *spending* more than we had ever spent before.

Certainly the savings campaign had something to do with the matter; so did rationing and the general shortage of consumables. But the biggest reason why we saved $3,000,000,000 in 1939 and $40,000,000,000 in 1944 was that our incomes rose—from $73,000,000,000 to $182,000,000,000. Evidently the government could induce sufficient savings to cover the "inflationary gap" of Fig. 10 only by causing the money national income to expand far more rapidly than the output of goods and services. The gap between government expenditures and revenues from taxes was closed only by resort to inflation. In other words, the "inflationary gap" resulted in inflation. Perhaps this could not have been avoided. Perhaps resources are diverted to military purposes least painfully when manufacturers of war

goods bid them away from peacetime uses by offering ever higher prices—and, as a result, earning and distributing ever larger money incomes. The mechanism of inflation involved the sale of bonds by the government to the banks. Its symptoms were seen in the declining purchasing power of the dollar. But further consideration of the inflationary character of wartime finance must be postponed until Chapter 21.

THE DISTRIBUTION OF INCOME ACCORDING TO ITS SOURCE

To know that the national income was so-and-so many billion dollars last year may tickle our imagination, but it tells us nothing about the way in which income is distributed. While the total national income, especially if considered in relation to the purchasing power of the dollar, provides the most comprehensive single measure of economic activity in general which we possess, it does not in itself tell us anything about the shares of the national income produced or received by different economic or social groups, or anything about the uses to which this income is put. We may think of the national income as a gigantic melon. The shares of the melon going to different sectors of the economy, or different economic groups, determines the welfare of one group compared with that of another.

It is interesting, in the first place, to inquire how various segments of the economy contribute to the flow of goods and services which constitute the net national product. Totals broken down in this manner were shown in Fig. 5, as were also the year-to-year changes in those totals. It can be seen, for example, that the contributions of agriculture and of manufacturing declined much more sharply during the depression of the early thirties than did the shares of the service industries (in which are included the independent professions) and government. It is interesting also to observe the extent to which government has increased its contribution during the period, especially after 1933, both absolutely and proportionately. This trend reflects not only the extensive work-relief and public-works projects of the later thirties and the vast governmental activity of the war years, but also the large addition during the last two decades to the list of regular governmental functions.[1] These changes can be seen most clearly if the data upon which Fig. 5 is based are converted into percentage form, as in Table 11. The period is not long enough, and the individual years are too much affected by special circumstances, for trends to emerge with great clarity. Nevertheless the table enables us to observe the steady increase in the economic im-

[1] See Chap. 24.

portance of the federal government and the decline in the share of income distributed by finance. A comparison of 1932 with other years shows how different industries fare under depression: the percentage shares of agriculture, mining, manufacturing and construction in total income were cut sharply. Commodity-producing industries naturally suffer when commodity prices fall. No industry had a larger income in 1932 than in 1929, but some —transportation and public utilities, finance and service—increased their percentage shares.

Table 11 **NATIONAL INCOME: PERCENTAGE DISTRIBUTION BY INDUSTRIAL ORIGIN, 1929-1946**

	1929	1932	1939	1944	1946
Agriculture	9.1	7.4	8.5	8.4	10.4
Mining	2.4	1.6	2.2	1.6	1.8
Manufacturing	25.2	17.2	24.7	32.8	26.7
Construction	4.2	2.5	3.1	2.3	3.4
Transportation and public utilities	10.8	13.0	10.2	8.3	8.4
Trade	15.0	15.1	16.7	13.0	18.4
Finance	15.0	15.5	11.3	7.2	8.3
Service	12.4	15.3	11.5	7.5	9.7
Government: federal	1.7	3.5	5.7	16.0	9.1
Government: state and local	4.2	8.9	6.1	2.9	3.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

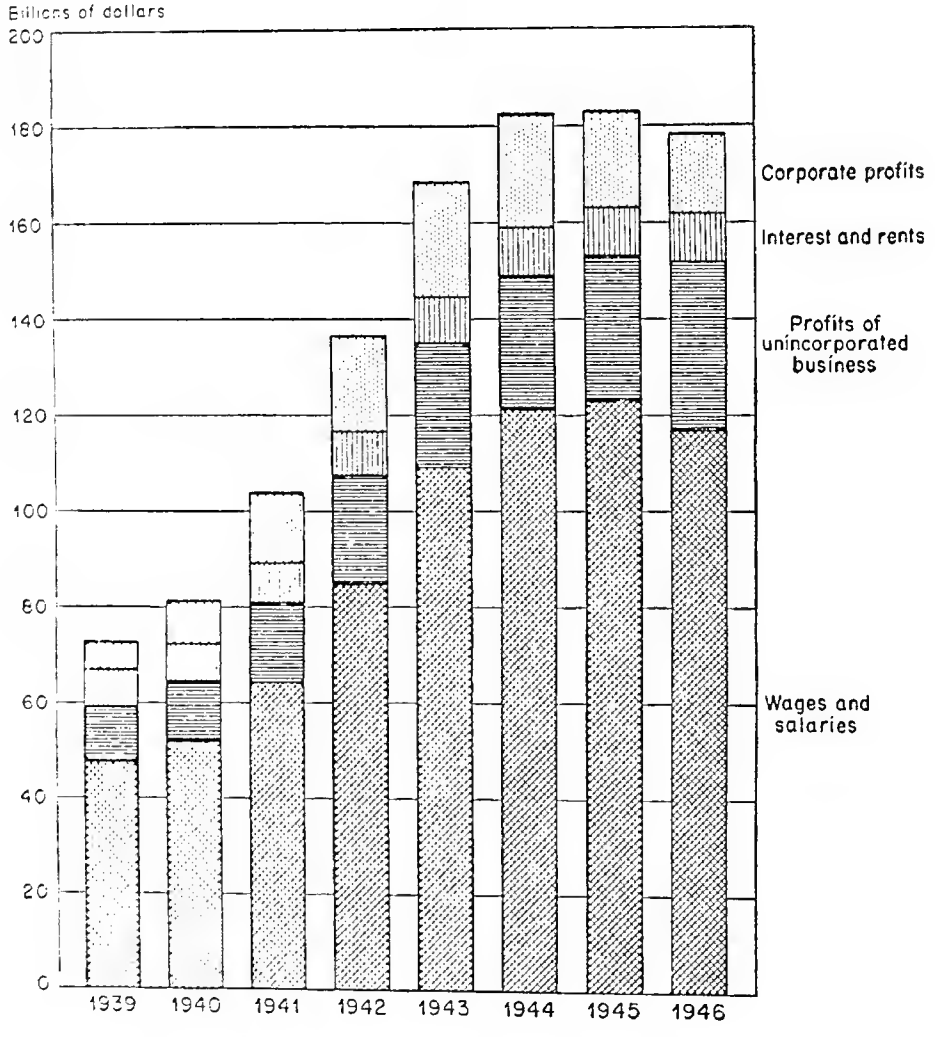
By 1939 business had largely recovered from the effects of the slump, and the melon (measured in constant dollars) was almost exactly the same size as it had been ten years previously (see Fig. 6 above). And, except for the large increase in the share of the federal government, the percentage contributions of different industries had not changed much in comparison with 1929.

In 1944 the nation was at war—a fact which dominated the picture. Almost one-third of the entire national income was earned in manufacture: factories were turning out a flood of munitions and other military supplies. The percentage contribution of the federal government was three times as large as in 1939. The increase reflects the expansion of employment at arsenals and dockyards and in other civilian services, and the payment of incomes to those in uniform. By 1946 the percentage contributions of the various industries had reverted roughly to their 1939 pattern.

DISTRIBUTION BY TYPE OF INCOME

Another way of analyzing the income total for a given year is to break it down among types of income. Some persons receive incomes from work and others from the ownership of property. The largest group of income

Figure 11 **NATIONAL INCOME, BY TYPE OF INCOME, CURRENT DOLLARS, 1939-1946**



receivers are those who receive wages or salaries. This group includes all who work for someone else—whether that someone else be an individual employer, a corporation, a charitable foundation, or a governmental unit—and consists predominantly of weekly-wage earners. The profits of unincorporated enterprises are also received by a very extensive group, which includes all persons working on their own account—the farmer and the

artisan, the doctor and the storekeeper. Bondholders, royalty owners, and landlords receive incomes fixed by contract. The profits of corporate enterprises are either paid out to stockholders in dividends, or saved and used within the enterprise. Some persons receive more than one type of income, but most income receivers are either employees or workers on their own account, or simple owners of property.

For years since 1939, Fig. 11 shows the division of income between wages and salaries and other kinds of income. It should be noticed that the data do not allow a clear segregation between income from work and income from property. Certainly, wages and salaries remunerate labor of one kind or another; and interest, rents and corporate profits are forms of property income. Yet the profits of unincorporated business do not clearly fall into either class. The farmer and the storekeeper look for a return on their investment as well as compensation for the labor they supply as working proprietors. No strict statistical division is possible, therefore, between income from labor and income from property. Nevertheless, we may fairly regard wages and salaries as the share of "labor," and interest, rents and profits (corporate or otherwise) as the share of "business."

Although the proportions in which income has been shared between these two groups of claimants in recent years can be seen rather clearly in Fig. 11, a still sharper impression may be gained by a study of the percentage shares given in Table 12. This table calls for several comments. In the first place, the share of wages and salaries remained relatively stable over the seventeen years for which we have comparable figures, never falling as low as 58 per cent nor rising as high as 75 per cent. The figures reveal little if any trend. Second, profits of unincorporated enterprise show somewhat less stability than wages and salaries, varying between 11 and 20 per cent. No trend is observable. Third, interest and rents declined from substantially more than 10 per cent in the 1930's to a level between 5 and 6 per cent during and since World War II. This decline is to be explained by the long-term contractual nature of interest and rent payments which led to continued stability in absolute dollar volume at a time when national income as a whole (measured in current dollars) was rising rapidly (see Fig. 5 above). Because of the wartime rise in prices, bondholders and landlords took a cut in their real income, as well as in the percentage share which accrued to them as a group. Fourth, corporate profits are a highly unstable fraction of the national income—heavily negative in 1932 and 1933, and ranging in other years as high as 14.5 per cent of the total.[1]

[1] Figures are before deduction of income and excess-profit taxes. The meaning of the negative percentages shown in the table can best be illustrated by quoting the actual

ıle 12 NATIONAL INCOME: PERCENTAGE DISTRIBUTION BY TYPE OF INCOME, 1929-1946

	Wages and salaries	Profits of unincorporated enterprises	Interest and rents	Corporate profits
1929	58.2	15.9	14.1	11.8
1930	62.0	14.6	14.6	8.8
1931	67.0	14.0	16.2	2.8
1932	74.0	11.8	19.0	—4.8
1933	74.1	13.2	17.7	—5.0
1934	70.0	13.6	14.1	2.3
1935	65.3	17.4	12.0	5.3
1936	63.7	18.2	10.7	7.4
1937	64.8	16.6	10.2	8.4
1938	66.4	16.0	11.2	6.4
1939	65.9	15.6	10.6	7.9
1940	63.6	15.6	9.5	11.3
1941	61.9	15.9	8.1	14.1
1942	62.1	16.6	6.8	14.5
1943	64.8	15.4	5.7	14.1
1944	66.5	15.2	5.4	12.9
1945	67.2	16.5	5.5	10.8
1946	65.5	19.6	5.6	9.3

RIBUTION OF INCOME BY SIZE

A third and very important way of looking at the distribution of in-:s relates to the income-size bracket in which the recipient is to be d. Such information allows us to judge the degree of equality or in-lity with which incomes are distributed. Unfortunately precise size :down cannot be given year by year for the national income totals so lescribed. This is because the derivation of size distributions is a con-ably more complicated task than the assembly of annual totals. Usually :cial field investigation is required, and elaborate sampling techniques to be used. The last such investigation was made in 1941 and some of

nt dollar figures for, say, the year 1932. In that year, in which national income 42,000,000,000, a consolidated income account for all corporations shows a net loss 000,000,000, or 4.8 per cent of national income. Remaining incomes shares together d $44,000,000,000, or 104.8 per cent of national income. Even in 1932 some corpora-made profits; but the excess losses of corporations making losses over the profits of rations making profits was, as already indicated, $2,000,000,000.

its results will now be studied. By 1949 the income of the average individual, measured in money, was larger than in 1941. Yet the shape of the distribution—i.e., the degree of equality or inequality—was probably similar.

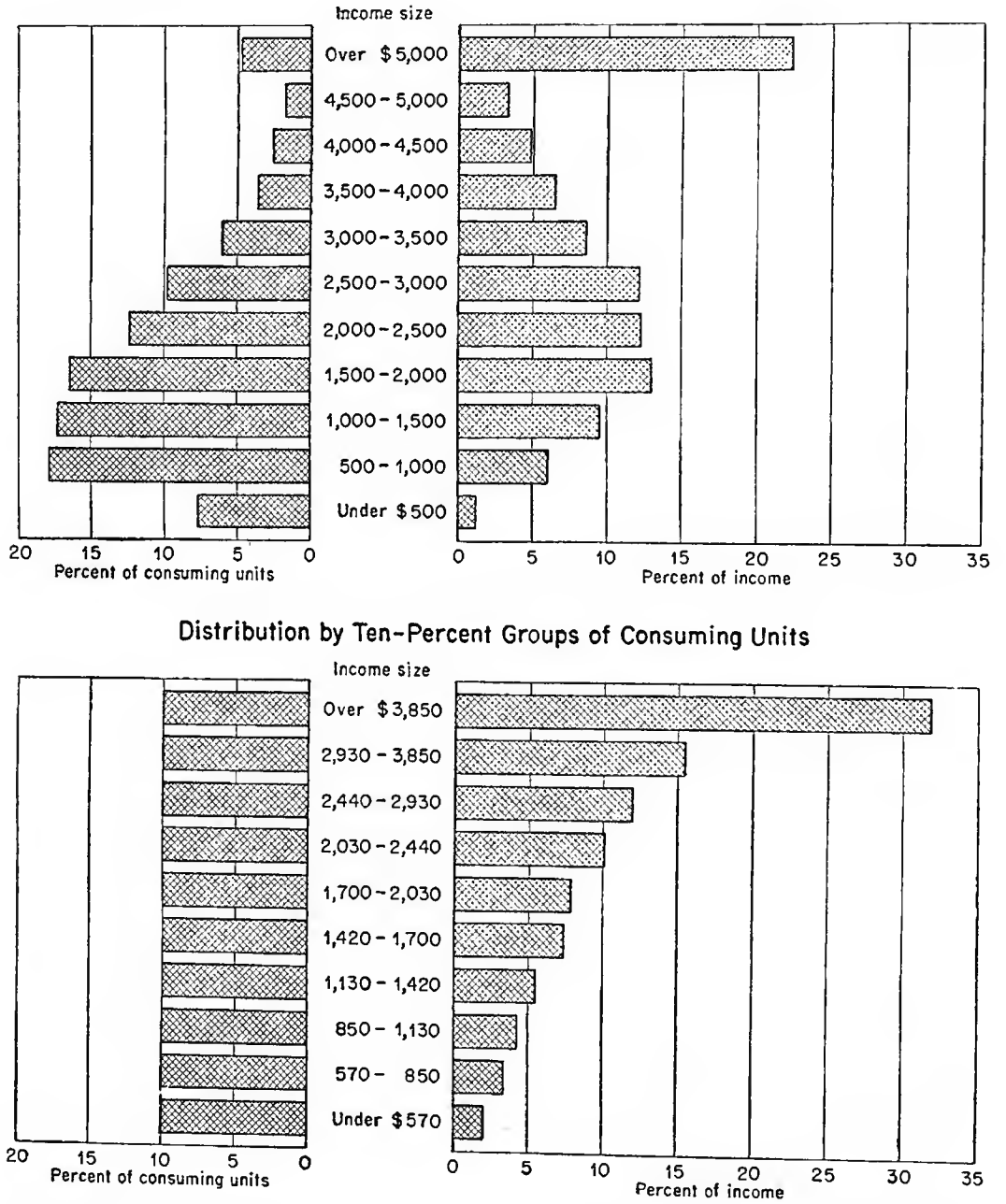
The civilian population of the United States in 1941 was about 131,000,000. We do not know exactly how many people received incomes in that year, for the population total of course includes children and other dependents as well as wage earners and other income receivers. We do know that the 131,000,000 civilians could be grouped into about 39,000,000 "consuming units." These consuming units consisted of 34,000,000 families of two or more persons and upwards of 5,000,000 single individuals. The percentage distribution of income among consuming units, according to the size of income received by each, is shown in Fig. 12. In addition to cash income, the data include an allowance for income received in kind, as when farm families consume food they themselves produced.

If the distribution of income were equal, 100 per cent of the consuming units and 100 per cent of the income would obviously be concentrated in the same income bracket. An absolutely equal division would have yielded about $2,200 for each of the 39,000,000 consuming units in 1941. We find instead that between 7 and 8 per cent of the units received less than $500, while more than 20 per cent of the income went to units receiving more than $5,000 each. Three-fifths of the families and individuals had incomes below $2,000 and four-fifths had incomes below $3,000. These facts can be observed in the upper half of Fig. 12. The incomes mentioned are before payment of income taxes. Because the personal income tax is steeply graduated, the distribution of incomes after payment of tax would be somewhat less unequal.

The lower half of Fig. 12 shows precisely the same income distribution, but instead of being based upon income brackets of equal size ($500-$1,000, $1,000-$1,500, etc.), income is divided between the 10 per cent of all families and individuals receiving the lowest incomes, the 10 per cent receiving the next lowest incomes, and so forth. From this we see that the poorest 10 per cent of consuming units received but 2 per cent of the national income, and the incomes of this group were all less than $570. On the other hand the wealthiest 10 per cent, all of whose incomes exceeded $3,850, together received nearly one-third of all income. The midpoint in the income range, or median income, was evidently $1,700, for half the families and individuals had incomes smaller than this, and half had incomes larger. Collectively the latter group received about three times as much income as the former.

The distribution of income among individuals is therefore very unequal. This inequality results partly from the fact that wide differences prevail between the salary or wage levels for different kinds of work, and partly

Figure 12 **DISTRIBUTION OF INCOME BY SIZE, 1941**



from the fact that some people possess substantial amounts of income-yielding property while others depend wholly upon what they themselves can earn. Marked inequality in the distribution of income is not peculiar to the United States, but is characteristic of all Western nations (with the partial

exception of the Soviet Union). Unfortunately, the statistical record does not extend far enough backwards in time for us to test Marx's view, expressed three-quarters of a century ago, that the distribution of income is gradually becoming more unequal—that is, that the rich are becoming richer and the poor poorer.

DISTRIBUTION OF INCOME BY STATES

Judged by the incomes their inhabitants receive, some states are much wealthier than others. From the left half of Fig. 13, which shows the distribution of income among the forty-eight states and the District of Columbia, it will be seen that in 1945 New York's income was more than $20,000,000,000, Nevada's less than $200,000,000, i.e., less than 1 per cent of New York's. Of course New York has a much larger population than Nevada, and much of the variation in income between one state and another is due to differences in the number of their inhabitants. Accordingly a more significant standard is obtained if we divide each state's income by its population.[1] The result is the average income per capita for each state, as shown in the right half of Fig. 13. Variations in per capita income among states are not quite as striking as in total income, but are still considerable. Since average income per inhabitant seems more significant than a state's total income, the states have been arranged in descending order of income per capita.

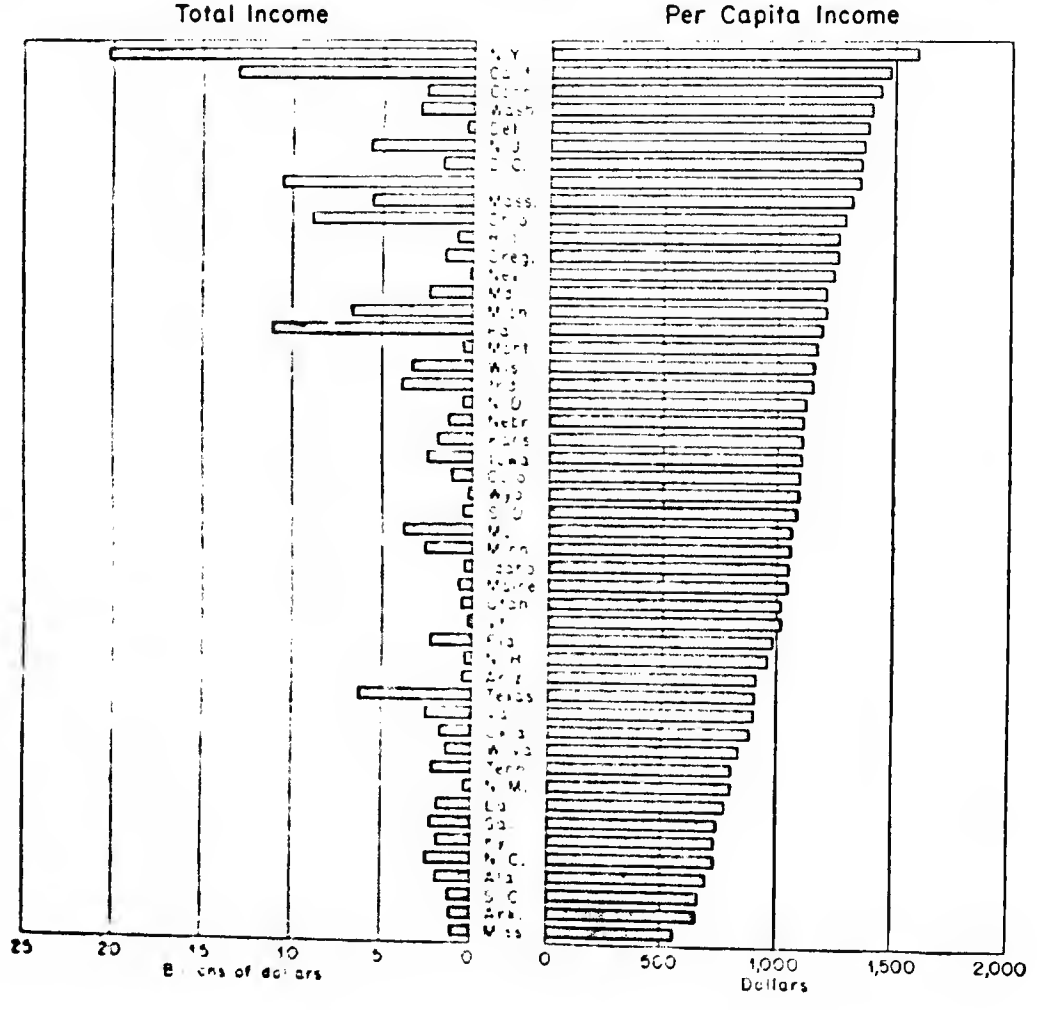
It is now seen that New York tops the list in per capita as well as total income—although its per capita income in 1945 ($1,595) did not greatly exceed Nevada's ($1,243), Nevada having the smallest total income (but also the smallest population) of any state. The poorest state in point of per capita income was Mississippi, the average Mississippian receiving but $556, or little more than one-third of the New Yorker's $1,595. In general the inhabitants of the North Atlantic and Pacific states appear to receive the largest incomes, the people of the Ohio, upper Mississippi valley and Mountain states next, and the residents of the Southern states least. This rule is not quite without exception. Still, we may notice that the six wealthiest states all lie on the North Atlantic or Pacific coasts, while the eight poorest states all lie below the Mason-Dixon line.

The inhabitants of the four richest states had average incomes in excess of $1,400 and of the three poorest average incomes below $700 in 1945.

[1] We could divide by the number of families or consuming units, as in the preceding section, but the distribution of families among states in 1945 is not accurately known

Per capita incomes of the other forty-one states and the District of Columbia range all the way between these limits. What factors account for this rather startling variation in levels of per capita income from one state to another? Probably the most important reason is that a worker's earnings

Figure 13 DISTRIBUTION OF INCOME BY STATES, 1945



vary greatly from occupation to occupation. Professional and clerical workers tend to be paid most. Wage earners in factories earn more than mineworkers, mineworkers more than farmworkers, and farmworkers more than lumbermen. Clerical, professional and factory workers tend to congregate in cities. Partly for this reason urban earnings are higher than rural. It is no accident that six of the ten highest-ranking states—New York, California, the District of Columbia, Illinois, Massachusetts and Ohio—contain some of the nation's largest cities. Nevada and Montana would probably rank lower,

did not mining supplement farming. Not only are Southern states largely agricultural, but in some of them lumbering pulls down the average. Where Northern states depend heavily on agriculture, per capita income tends to be relatively low, as in the cases of Maine, Vermont, and New Hampshire. The high standing of Florida among Southern states is probably due to its tourist trade.

We should note in passing that the figures quoted relate to cash income and do not include farm products consumed on farms where produced. If such income could be included, the disparity between figures for predominantly urban and predominantly rural states would be lessened. Furthermore, the figures take no account of the fact that the cost of living is likely to be lower in the country than in the city, and lower in the West and South than in the East. Just as the buying power of the dollar, on the average over the United States as a whole, varies from year to year, so it also varies at any given time between one part of the United States and another part. Differences in per capita real income between states would therefore not be quite so great as those shown in Fig. 13.

LOOKING TO THE FUTURE

Up to this point we have confined our discussion to a review, on the basis of the best available data, of the size and composition of gross national product, and net national product or national income, during recent years. We cannot, however, leave the subject without raising some basic questions concerning the future. Several of these questions receive more extended discussion in later chapters.

The existence of widespread poverty, in a country potentially as wealthy as the United States, is so obviously paradoxical as to need no special emphasis here. Such poverty is particularly widespread and acute in periods of depression and unemployment, but it is not by any means confined to "hard times." In a year of such active trade as, for instance, 1941—with scarcely any unemployment—one-tenth of all families and single individuals received incomes below $570, and one-fifth of all incomes were smaller than $850 (see Fig. 12). It is not easy to say just what income is adequate for a normal-sized family, or for an individual living alone. Yet it is rather obvious that many incomes at the foot of the income scale must not be adequate even to provide a balanced diet, and that many more would yield little or nothing over and above the cost of food, if the diet were adequate.

For those who would attack the problem of poverty, two broad methods of approach are possible. The economic position of those who are in the lower income groups can be improved at the expense of the wealthy through a more equal distribution of the existing national income. Alternatively, the poor can be made better off, and also the community at large, through an increase in the aggregate national income to be distributed. That is to say, we may attempt either to divide the melon in a different fashion, or to obtain a larger melon.

MORE EQUAL DISTRIBUTION OF THE NATIONAL INCOME

The average income of families and single individuals in 1941 was about $2,200 (Fig. 12). This fact shows both that some amelioration of the position of the poorest families can be brought about through redistribution, and also that there are strict limits to what such a policy can achieve. To families which get by on $500 or even $1,000 a year, $2,200 must seem riches. Yet the fact that a perfectly equal distribution of national income among consuming units at 1941 levels would give no one more than $2,200 will convince many that as a community we are still exceedingly poor.

In fact some degree of income redistribution, through the medium of taxation and government expenditure, has come to be accepted by most Western nations as a desirable and practical policy. Today government supplements individual incomes through the provision of many services free or below cost: education, housing, health and recreation are examples. Moreover, large sums were disbursed in relief payments during the depression of the 1930's by federal and state governments. Because of the way they are financed, such "social services" imply some redistribution of income.

Such services or benefits are ostensibly available to all, but in practice the services are rendered or the benefits are paid predominantly to persons or families in the lowest income brackets. For instance, only those below a certain income level may occupy municipally subsidized housing. Certainly, public education benefits a wider group than do the other services mentioned, but, even in this case, low-income families benefit most; many wealthy families do not use the public schools. Cash relief generally goes only to the very poorest. Now, the growth in importance of the graduated income tax as an instrument for raising revenue has meant that publicly provided services of the kind discussed have come to be financed more and more by persons in the upper income brackets, or at least by families and individuals with incomes above the average level of [illegible]

negligible redistribution of income actually is in progress. In fact whenever a decision is made to place the cost of government upon the upper rather than upon the lower income brackets, the effective distribution of income throughout the community is made to some extent more nearly equal. "Taxing the rich to benefit the poor" is a policy which has received some measure of endorsement in practically all industrial nations.

As a program for the eradication of poverty, redistributive taxation has definite limitations. In the first place, as we have seen, even if the melon were divided equally the result would not be very satisfying, because the melon itself is of such modest proportions. In the second place—to switch the metaphor—there may be some danger of killing the goose that lays the golden eggs. The efficient organization of production and the supply of risk capital depend to an unknown (but probably important) extent upon receipt of incomes by the wealthy. If too high a proportion of a man's income is taken away by the state in taxation, he may no longer trouble to earn so much: there will be less to tax, and a smaller product to distribute. So runs the argument. Whether redistributive taxation has already been pushed as far as it safely can be is a question which must be left for later discussion.

A LARGER NATIONAL INCOME

The obstacles which stand in the way of a solution of the problem of poverty through the redistribution of income have focused attention upon the question as to how we may increase the total amount of income available for distribution. As already indicated, the size of the product available for distribution depends upon the character of productive resources, the technical knowledge available for using them, and the degree to which they are employed. We have seen that, between the close of the Civil War and the outbreak of World War II, per capita real income was multiplied between two and one-half and three times. Most of the improvement in standards of living which took place during the nineteenth century and continued into the twentieth can be attributed to the rapid strides which were made in techniques of production, coupled with the accumulation of the capital necessary to exploit these improved techniques. Hope for increased per capita income in the future comes from the virtual certainty that techniques of production will continue to advance. There is, however, little that we can do deliberately to stimulate this advance, except perhaps by endowing scientific research.

A possibly more urgent problem, so far as the agenda of policy are concerned, is posed by the tendency for existing resources to be used below capacity. Measured in dollars of 1939 purchasing power, the national income was $43,000,000,000 in 1932; in 1946 it totaled $127,000,000,000 (Fig. 6). This comparison somewhat exaggerates the inefficiency with which our economic system was operating in the year 1932. The goods produced in 1946 were not always up to prewar standards of quality; moreover, more and better capital equipment was available, and techniques of production had advanced somewhat during the fourteen-year period. But when due allowance is made for such factors, it is apparent that the major difference between the two years was that in 1932 large numbers of persons were unemployed and much capital equipment was idle, whereas in 1946 the economy was operating in high gear with utilization of resources close to capacity. Sheer volume of output is not the only measure of the efficiency of our economy; leisure has a value, too. The important thing is that the leisure should be deliberate rather than involuntary. But further consideration of the problem of idle resources, human and material, must be postponed to the next chapter.

CHAPTER NINE

Booms and depressions

THE NATURE OF ECONOMIC FLUCTUATIONS

Our study of gross national product and national income in the preceding chapter revealed marked variations from year to year in the output and activity of the American economy. To take one instance, national income, whether measured in current or in constant dollars, declined steeply from 1929 to 1933, rose steadily from 1933 to 1937, declined again in 1938, and rose sharply once more in 1939 and later years. Again, in 1932 and 1933 unemployment was severe, whereas in other years, such as 1929 and 1939, most people who wanted jobs could find them. In still other years, for example during and immediately following World War II, there appeared to be far more unfilled jobs than unemployed workers.

More or less regular fluctuations in the level of economic activity are characteristic of industrialized communities where production is organized in business enterprises. In the economic history of the United States such fluctuations, or "business cycles," can be traced at least as far back as the American Revolution. Similar, and roughly contemporaneous, cyclical movements are found in the history of other Western countries. There are periods lasting for a few months or a few years during which production and employment increase in most lines of enterprise; at such times businessmen in general pronounce conditions to be "good" or "improving." But such periods of expansion tend to be followed, more or less regularly, by periods of contraction during which goods become harder to sell, and production and employment decline. Workers find it progressively more difficult to get jobs, and many businesses begin to lose money. Talk of "hard times" is heard in the land. After a while recovery in business begins.

The wavelike sequence of expansion, recession, contraction, and revival is experienced afresh.

Our decision to study business cycles at this point is due to the important relations of the subject to all phases of our economic life. Many and varied economic problems will be treated in subsequent chapters: for example, employment and wage conditions, the monetary system, public finance, and the many-sided problem of economic control. All such conditions and problems must be thought of as appearing against a background of economic instability. That a thorough study of the nature and causes of economic fluctuations would take us far afield, is best seen by the wide variety of explanations that have been offered and the vast literature that the subject has aroused. Although some of the more general causal factors will be mentioned, it is the primary purpose of this chapter to present an analytical description, and not a theory or explanation, of business cycles.

VARIOUS TYPES OF FLUCTUATIONS

In considering the nature of business cycles and some of the more general forces and conditions that contribute to them, it is well to note, first of all, that cyclical movements are but one of several types of industrial fluctuations that characterize the economic system as we know it. For instance, certain segments of our economy undergo, every year, fairly regular seasonal fluctuations. Department store sales tend always to increase sharply in the two or three weeks preceding Christmas, and to decline to a seasonal low level during the month or two after Christmas. For obvious reasons, employment in agriculture and in construction work is higher in summer than in winter. Obviously, seasonal variations can be better anticipated than can cyclical movements.

We should notice, too, that certain persistent long-period changes have occurred during our economic history. For example, the mileage of new railroad construction in the United States increased from decade to decade between 1830 and 1890, and declined somewhat irregularly in the period following 1890. We speak of these as "secular" changes. Finally, there are other fluctuations that occur in a rather random fashion, fluctuations such as those attributable to strikes, to wars or rumors of war, or to some sudden natural calamity. The fact that changes of these several types, and cyclical fluctuations as well, occur in combination, and that they are not easily distinguishable one from the other, greatly complicates the analysis of the cycle.

Indeed some economists argue that it is futile to try to isolate from this combination a uniform type of change that can be called strictly "cyclical" in character. But this problem, though vexing in connection with more technical studies of the subject, need not prevent us from attempting a working description of business cycles. Recognizing that at any given time business conditions may be influenced by fluctuations of all the types mentioned, it is still possible to detect distinct cyclical movements. Hence, we will be concerned here, not with economic changes of a secular or a seasonal character, but only with those which are cyclical in nature.

THE MEASUREMENT OF CYCLICAL MOVEMENTS

The use of statistics. The changes involved in business cycles are both qualitative and quantitative. Those that are most important to a description of cyclical processes, however, are quantitative changes. For this reason we shall make extensive use of statistics. Because we are interested exclusively in temporal changes, the statistics used in charts in this chapter are all arranged in the form of *time series;* that is, each chart indicates the changes in some quantity or quantities (e.g., railroad freight traffic, wholesale prices, manufacturing production, or employment) over a period of time.

In some charts (Figs. 14, 15, 16 and 18) the statistical data have been plotted on a *ratio* (or *logarithmic*) *scale.* Thus a given vertical distance, say one inch on the chart, measures the same percentage change on whatever portion of the chart the measurement is made.

Index numbers. The changes that occur over a period of time in many economic aggregates (e.g., the "volume of production" or the "general price level") are measured by *index numbers.* The consumers' price index of the Bureau of Labor Statistics, used in Chapter 8 to deflate national income totals, is an example. An index number represents the average level of a group of component variables (e.g., prices of individual commodities) at one time by comparison to their average level at some other time. In computing index numbers, the average for a particular time is taken as the *base,* to which its size at all other times is compared. The size of the average in the base period is taken to be 100, and the averages for other years (or quarter-years, or months) are expressed as a percentage of the size in the base period. For example, the Bureau of Labor Statistics index of wholesale prices is shown in Fig. 16 for the period 1914-46 with the average level of the year 1926 taken as base, and given the value of 100. The wholesale prices of 784 commodities are averaged in computing the index. Fig. 16 is drawn from quarterly data. Thus the peak figure for the second quarter of 1920

is 166, i.e., the prices of these commodities at wholesale during April-June 1920 averaged 66 per cent higher than they did during the year 1926. On the other hand, at its nadir during the first quarter of 1933 the index measured 60, i.e., wholesale prices averaged 40 per cent below 1926.

Because Fig. 16 is drawn on a logarithmic scale, comparisons need not be confined to those between 1926 and other years, nor to levels of wholesale prices. The consumers' price index (sometimes called the "cost of living" index), which measures the price of food, clothing, houseroom and other consumables at retail, happens to be computed on a different base, average 1935-39 = 100.[1] A given vertical distance on the chart, however, measures the same percentage change, whichever index we are considering. A careful inspection of the chart will show, for instance, that consumers' prices almost exactly doubled between 1914 and 1920, whereas wholesale prices more than doubled. Between 1940 and 1945 consumers' prices rose about 30 per cent, wholesale prices about 35 per cent.

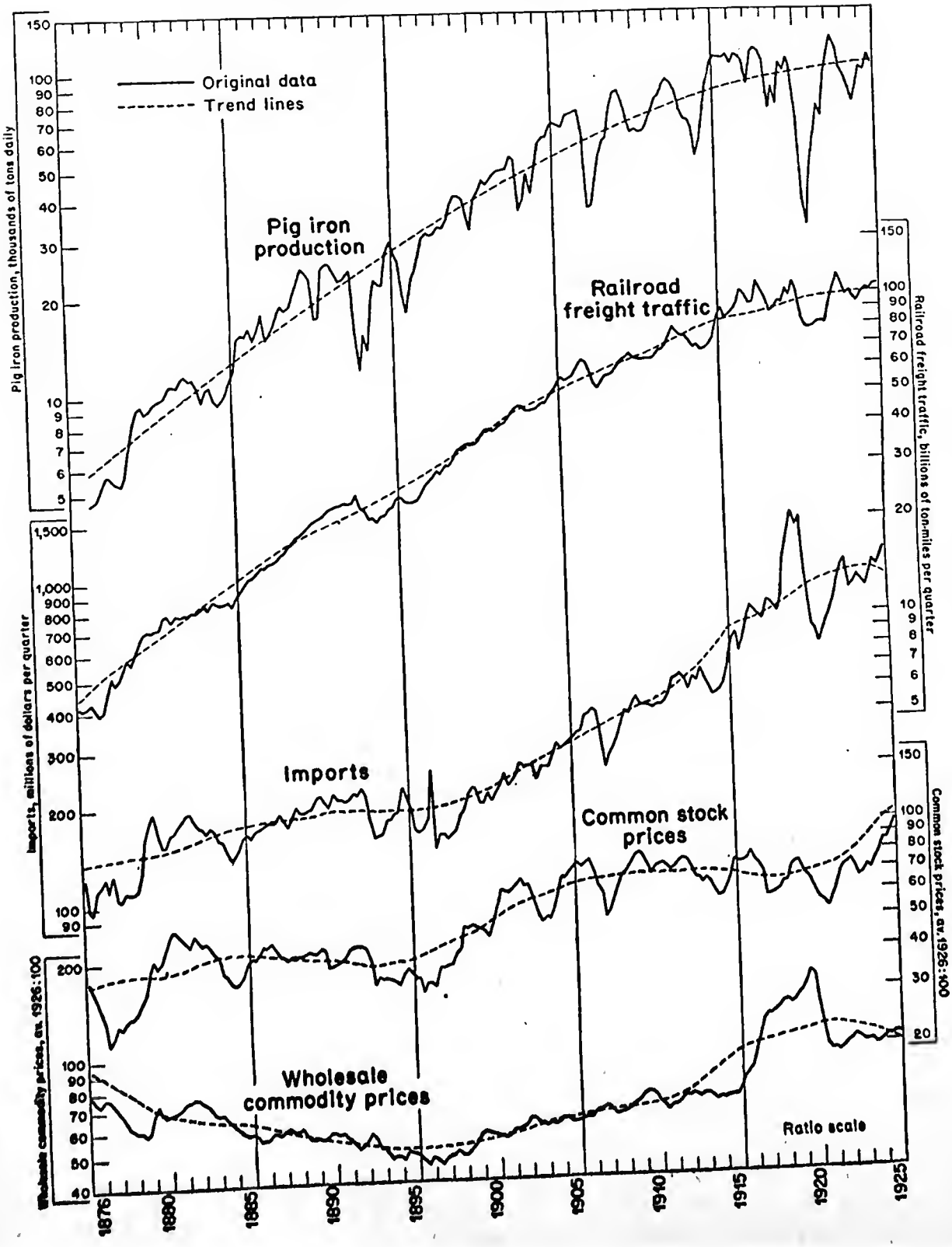
SOME REPRESENTATIVE TIME SERIES

It was remarked above that cyclical fluctuations in the American economy can be traced back for at least a century and a half. However, the existence of more or less regular fluctuations affecting widely separated economic processes can be seen in the history even of a few decades. Five time series referring to distinct and more or less unrelated economic variables are shown in Fig. 14 for the period 1876-1925.[2] Two of them—pig iron production and railroad freight traffic (measured in ton-miles)—relate to the output or movement of commodities in physical terms. A third—imports—refers to the movement of commodities measured in dollar values. The two remaining series are index numbers of prices, in the one case of common stocks traded on the New York Stock Exchange, and in the other of commodities at wholesale. The first three series shown have a pronounced upward trend or secular growth, so pronounced that cyclical movements are partly obscured. Common-stock prices show a mild upward trend; while

[1] As used in Chapter 8, this index was recomputed to a base 1939 = 100.

[2] The series are plotted from quarterly averages of monthly data. Annual data sometimes distort cyclical movements, while monthly data may give unnecessary prominence to random fluctuations. Figures for pig iron production, railroad freight traffic and imports have been adjusted to exclude seasonal variations; the price series have no seasonal component. The period 1876-1925 was chosen for Figs. 14 and 15 because it was desired to compute trends, and this cannot readily be done for years more recent than 1925.

Figure 14 **SELECTED TIME SERIES, 1876-1925, ORIGINAL DATA AND TREND LINES**



commodity prices exhibit a declining trend in the first half, and a rising trend during the second half of the period.

PEAKS AND TROUGHS OF ECONOMIC ACTIVITY

In order more clearly to observe cyclical movements, the same five series are shown in Fig. 15 in the form of percentages of trend. Fluctuations of the series are the same as in Fig. 14, except that the secular trend has been removed. Despite many random movements, the tendency of the five series in Fig. 15 to rise and fall together is rather clear. Peaks common to all five series may be roughly distinguished by inspection in or about the years 1882, 1893, 1899, 1907, 1910 and 1920. A similar coincidence of low points is observable about 1878, 1885, 1897, 1904, 1908, 1915 and 1921.

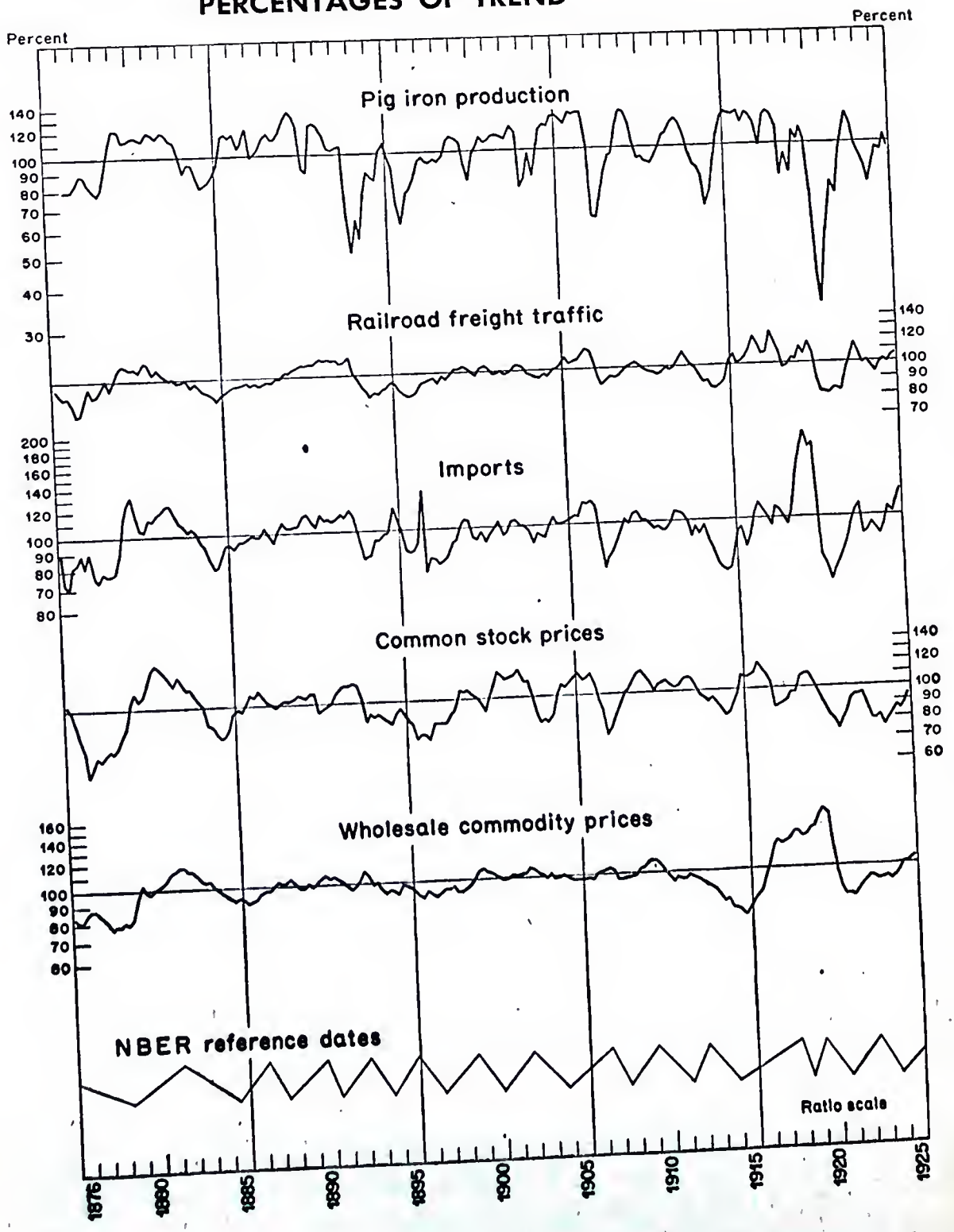
A complete cycle can be marked off either between successive peaks, or between successive troughs. The second method, i.e., measurement from trough to trough, is usually followed. On the assumption that, after a careful inspection of Fig. 15, the reader is willing to accept the dates just mentioned, we reach the tentative conclusion that during the period 1876-1925 the American economy underwent six complete business cycles. Yet a thoroughgoing study and comparison of many hundreds of time series by the National Bureau of Economic Research has led to the conclusion that there were in fact not six, but as many as thirteen, cycles in "general business" between 1879 and 1924.[1] The reference dates, or turning points in general business, which mark off these thirteen cycles are shown in diagrammatic form at the foot of Fig. 15. Revival of business initiated the first complete cycle covered by the chart in March 1879 (not 1878 as our series might suggest), the expansion came to an end in March 1882, and the ensuing contraction lasted until May 1885. The last complete cycle shown on the chart began by revival of business in September 1921, reached a peak in May 1923, and had a contraction ending in July 1924. Not all the thirteen peaks and fourteen troughs can be readily identified in every one of our five series, yet each of the twenty-seven turning points can be traced in at least one of the series shown.

RECENT BUSINESS CYCLES

Cyclical movements in recent decades may be observed for various series in Figs. 16, 17, 18 and 19. In Fig. 16 the six cycles between 1914 and

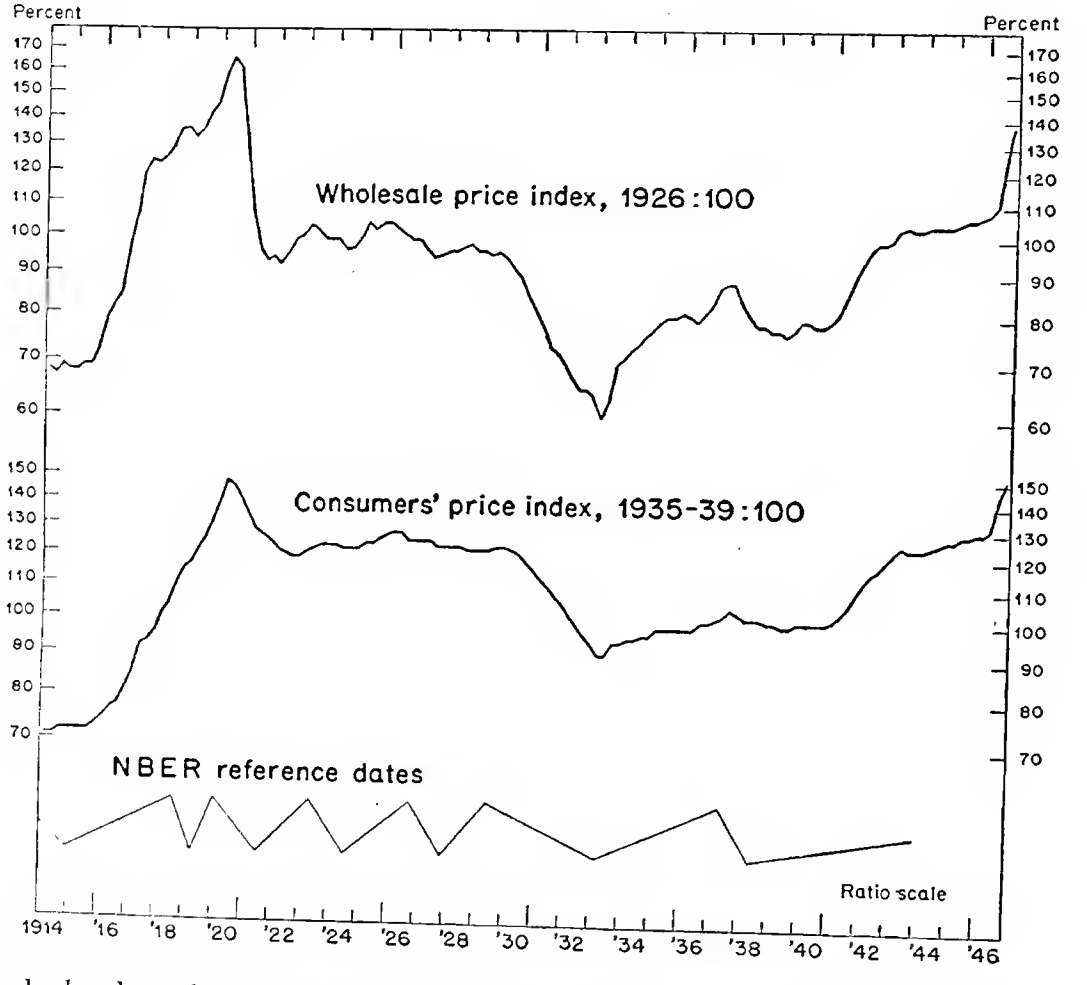
[1] See Arthur F. Burns and Wesley C. Mitchell, *Measuring Business Cycles*, National Bureau of Economic Research, New York, 1946, Chap. 4, especially p. 78.

Figure 15 **SELECTED TIME SERIES, 1876-1925, PERCENTAGES OF TREND**



38 for which reference dates are shown (see foot of chart) can all be ced in the movements of the index of wholesale prices, although some tures—for instance, peaks in 1920 and in 1937—stand out much more rply than do others. The consumers' price index also exhibits cyclical vements, although much less clearly. The four cycles between 1921 and

gure 16 **PRICE MOVEMENTS, 1914-1946**


Percent
Percent
Wholesale price index, 1926:100
Consumers' price index, 1935-39:100
NBER reference dates
Ratio scale
1914 '16 '18 '20 '22 '24 '26 '28 '30 '32 '34 '36 '38 '40 '42 '44 '46

, and the length and severity of the Great Depression between the s of the third and fourth of these cycles, can also be seen in the data profits, production, employment and other series in Figs. 17, 18 and 19. The latter charts, especially, show how greatly cycles vary, both in tion and in amplitude. The contraction which hit bottom in 1921 was st as severe as—and even more abrupt than—that which came to an end in 1932 or early in 1933. The Federal Reserve Board index of manu- ring production (average 1923-25 = 100) in Fig. 17 fell to 64 during irst and second quarters of 1921; a low of 59 was registered in the

second quarter of 1932. Yet the contraction lasted twenty months in the first case, forty-five months in the second. The reputation for severity of the Great Depression of the thirties was due at least as much to its duration as to its intensity. The contractions of 1923-24 and 1926-27 were mild indeed by comparison.

DURATION OF BUSINESS CYCLES

If we combine the data in Figs. 15 and 16, taking care not to count more than once the years in which they overlap, we have a record altogether of 16 complete cycles. Since the first begins in March 1879 and the last ends in May 1938, the 16 cycles cover a period of 59 years and 2 months, or a total of 710 months. Their average duration is therefore about 44 months. Between 1834 and 1938, 26 cycles have been identified, their average length being just 4 years. Schumpeter of Harvard has christened cycles of this length or somewhat less "Kitchin cycles" after Joseph Kitchin, their earliest observer. They range in length—according to the chronology used here for business conditions in the United States—from under 2.5 years for the cycle April 1919-September 1921 (Figs. 15 and 16) to 7 years for the cycle 1848-55.[1]

The fact that the Kitchin cycles so far described differ markedly in amplitude, and that every second or third cycle seems more violent than the intervening ones, has stimulated attempts to identify cycles of somewhat longer duration. Thus the years 1848, 1858, 1867, 1878, 1885, 1894, 1904, 1914, 1921 and 1932 seem (with the possible exception of 1904) to have been years of especially deep troughs (i.e., of especially depressed business conditions).[2] A rough and ready confirmation of the plausibility of this chronology is obtained by observing that the troughs of 1878, 1885, 1894 and 1914 (if not of 1904) in Fig. 15, and of 1921 and 1932 in Figs. 16, 17, 18 and 19, seem to have been deeper than cyclical troughs at other dates. If the hypothesis is accepted, we have over the period 1848 to 1932 nine such cycles averaging between 9 and 10 years in length. They have been called "Juglar cycles" after the French economist, Clément Juglar.

Finally, the Russian economist Kondratieff has directed attention to what appear to be cycles of even longer duration, at least in wholesale prices and perhaps in some other aspects of economic activity. Certainly in the United States, with many interruptions, prices seem to have risen from

[1] See Burns and Mitchell, *op. cit.*, p. 78.

[2] The chronology is taken from Burns and Mitchell, *op. cit.*, p. 441.

1789 to 1814, fallen from 1814 to 1843, risen from 1843 to 1864, fallen from 1864 to 1896-97, risen again through 1920, and fallen from that date until 1932.[1] The trough in wholesale prices in 1896-97 and the peak in 1920 may be observed in Fig. 14, while the decline from 1920 to 1932 is clearly visible in Fig. 16. If these dates are correct, the three complete cycles between 1789 and 1932 occupied all of 143 years, so that the Kondratieff cycles (if such really exist) appear to have an average duration of between 40 and 50 years.

VARYING CHARACTERISTICS OF BUSINESS CYCLES

We have seen that cyclical movements recur somewhat irregularly. Comparison of different cycles reveals other irregularities. Some cyclical peaks have immediately preceded severe financial crises and widespread bankruptcy (in 1893, for instance); on other occasions prosperity has ebbed away so gradually that businessmen have failed to realize till many months later that a recession in business had begun (as in 1937, for example). In some cycles the contraction phase has been brief but severe (1920-21 and 1937-38), in others brief and quite mild (1923-24 and 1926-27), in still others prolonged and severe (1929-33). It has been said that no two cycles are perfectly alike. Yet important features are common to all, or almost all, cycles. Some of these features provide important clues to the mechanism underlying business fluctuations.

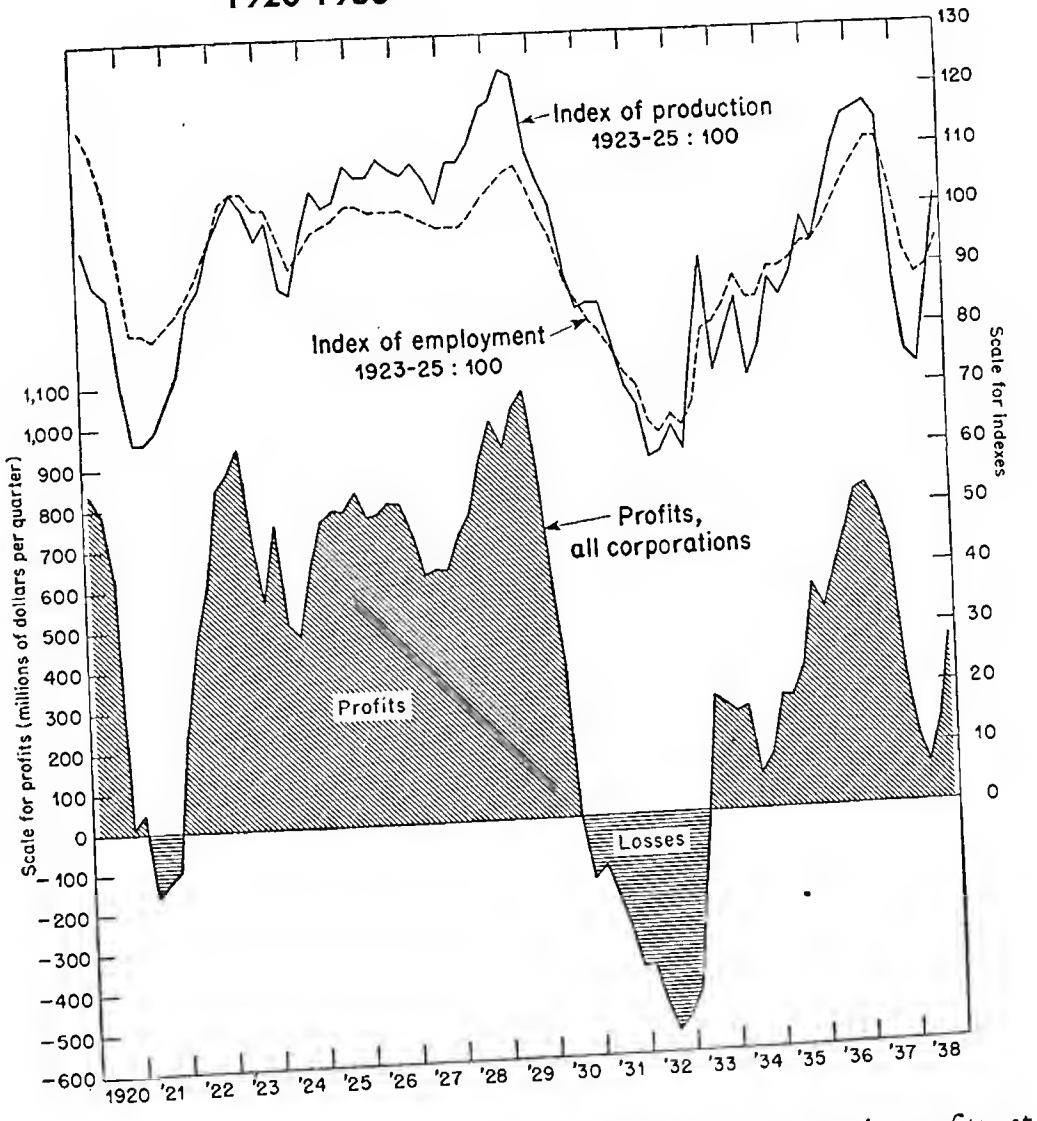
CYCLICAL UPS AND DOWNS OF PRICES AND PROFITS

Commodity prices fluctuate rather regularly with business conditions, rising in expansions (with one striking exception to be noted below) and declining in contractions (Figs. 15 and 16). Costs of production are much more stable. For example, wage rates—an important element in costs—are frequently settled for a year or more at a time. When selling prices rise, costs of production tend to lag behind: the same holds true when prices fall. In view of this circumstance it is not surprising that business profits should rise during expansions and fall—or turn into losses—during contractions. Comprehensive statistics of profits are not available for the period prior to World War I, but they are shown for manufacturing industry for the period 1920 to 1938 in Fig. 17. The figures plotted in the chart are aggregates. Even in years of high profits some firms, through poor management or misfortune, may realize losses. Similarly, for periods in which

[1] See Burns and Mitchell, *op. cit.*, pp. 432, 439.

losses are shown on the chart, some corporations still remained in the black, but their gains were exceeded by the aggregate of losses made by firms in the red.

Figure 17 MANUFACTURING INDUSTRY: PRODUCTION, EMPLOYMENT, AND CORPORATE PROFITS, 1920-1938



It is obvious from Fig. 17 that the cyclical movements in profits, at least during the period covered, were very violent. High profits act as an incentive to increased production. It is consequently not surprising that factory employment and output, also shown in Fig. 17 (as index numbers), should fluctuate in consistency with fluctuations in profits. The data shown are confined to manufacturing industry, but the relationships apply to

other industries also. Cyclical expansions are characterized by rising prices and profits, and growing output and employment; the reverse is true of contractions.

If this statement had been written thirty years ago, no further qualification might have been necessary. Prior to World War I the index of wholesale prices appeared to be one of the most faithful indicators of cyclical fluctuations (Figs. 14 and 15). 1920 is a peak in wholesale prices, as in other series; so indeed is 1937 (Fig. 16). Yet the expansion which ended in 1929 was not characterized by rising prices. This is one example of the peculiarities of individual cycles. We should, however, notice a possible explanation. During the twenties factory output rose more rapidly than employment (Fig. 17). We may surmise, therefore, that productivity was increasing and unit costs declining; hence profits reached a peak in 1929, despite the fact that prices were remarkably stable.

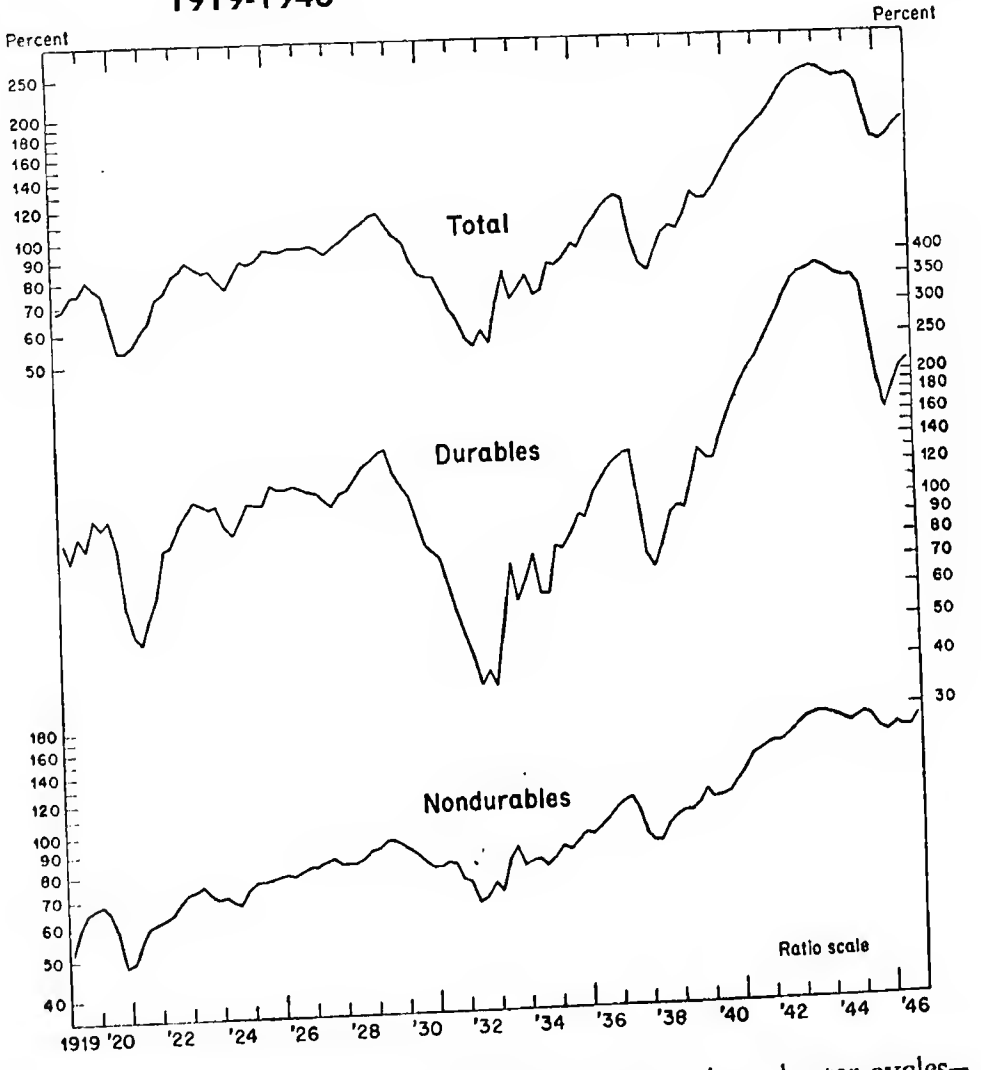
FLUCTUATIONS IN OUTPUT OF DURABLE AND NONDURABLE GOODS

The index of manufacturing production in Fig. 17 is broken down in Fig. 18 between durable and nondurable manufactures. The distinction between commodities according to their durability is an important one, for a glance at Fig. 18 shows that outputs of commodities of the two classes behave quite differently. Durable manufactures consist of two kinds: (1) "capital goods," such as building materials, iron and steel products, machinery, and railroad equipment; and (2) durable "consumers' goods," such as automobiles, refrigerators, and washing machines. Nondurable manufactures comprise materials and nonpermanent consumers' commodities, such as articles of food and clothing. The amplitude of fluctuation, in the course of a business cycle, is typically much greater in the production of durable goods than in that of nondurable goods. Thus it is characteristic for the production of durable goods to rise more during booms, and to fall more in periods of recession, than is the case with the production of nondurable goods. In general, the purchase of durable goods can be postponed somewhat during depressed periods; nondurable goods consist in large part of commodities of which people are more steadily in need, and which, therefore, must be bought at fairly regular intervals.

For these reasons, the curve for production of durable goods in Fig. 18 shows cyclical movements much more clearly than does the curve for production of nondurables. For instance, the latter series shows very clearly why the three "Kitchin" cycles, 1921-24, 1924-27, and 1927-32, have been regarded as constituting a single "Juglar" cycle lasting about 11 years from

1921 to 1932. The cycle beginning early in 1933 and lasting through 1938 also stands out clearly. (At the time of writing—1948—this appears to be the last completed cycle.) Whether this five-year period, 1933-38, should be considered as a very short Juglar, or as a very long Kitchin—whether

Figure 18 **INDEXES OF MANUFACTURING PRODUCTION, 1919-1946**



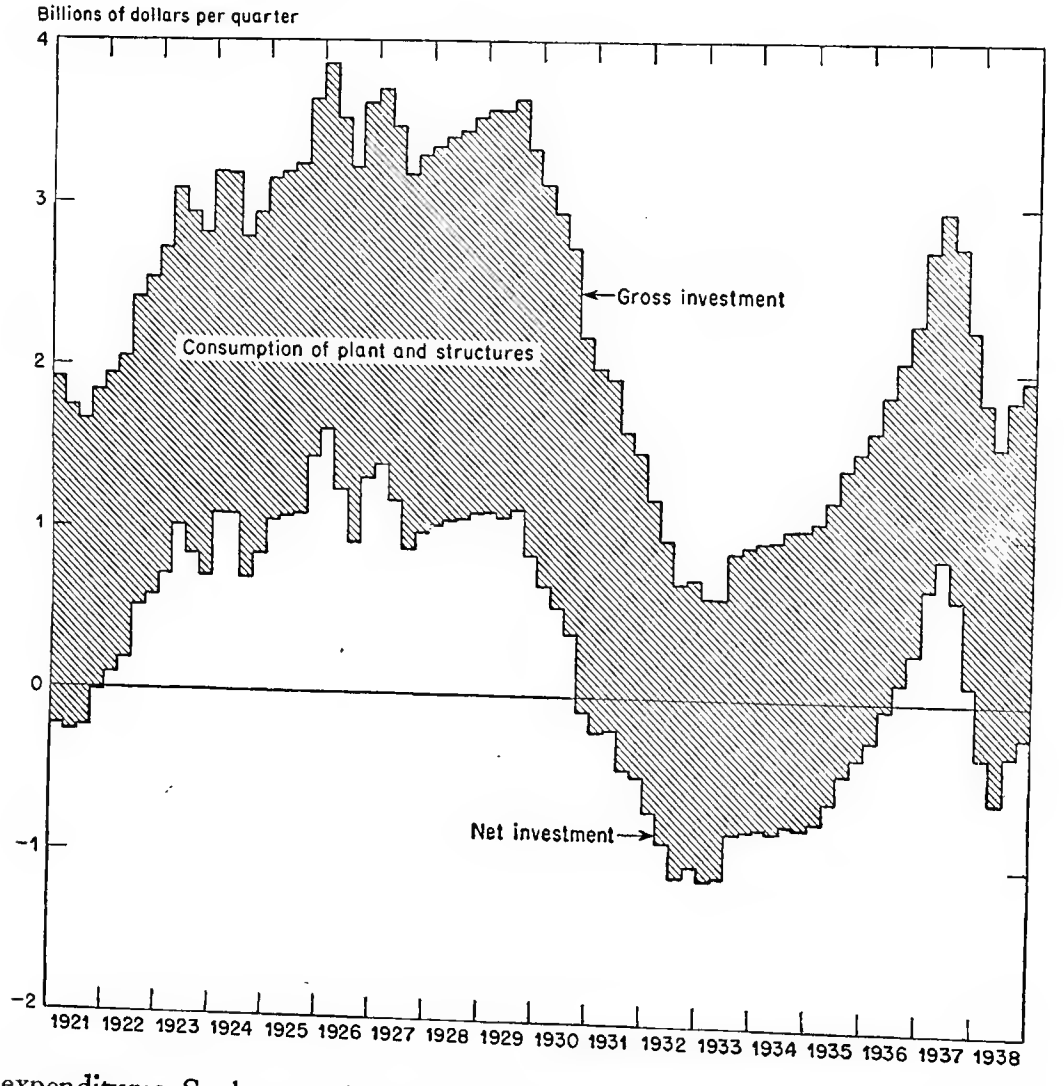
indeed it represents a single cycle, or should be broken into shorter cycles—these questions are still controversial.

FLUCTUATIONS OF INVESTMENT

Nondurable goods are rather rapidly consumed—by the productive system in the case of raw materials, by the public in the case of consumables. Durable goods are partly purchased by the public (as with auto-

mobiles) and partly by business (as with machinery and other capital goods for expansion and replacement). Capital goods are purchased by business for the income which they yield when used in production. Outlays for capital goods, together with construction work, are known as investment

Figure 19 **INVESTMENT IN PLANT AND STRUCTURES, 1921-1938**



expenditures. Such expenditures are in a high degree postponable, and their volume at any particular moment is governed mainly by the expectations of businessmen concerning future profits. Notoriously, these expectations are subject to waves of optimism and pessimism. It is not surprising, therefore, that investment expenditures should undergo marked cyclical fluctuations.

Fig. 19 shows gross private investment in plant and buildings, i.e., total expenditures for capital goods and new construction (including residen-

tial), by quarter-years. The chart also shows "depreciation" or the value of capital goods and structures used up each quarter. The residual is called net private investment, i.e., the net addition to the community's stock of plant and buildings. To ask the question whether or not net investment remains positive, is one way of testing the severity of business depression. By this test, the contraction of 1929-32 is by far the most severe during the period covered by Fig. 19. Unfortunately we do not have a record of investment expenditures prior to 1921, so that we cannot make comparisons with still earlier cycles.

THE EXPANSION PHASE OF CYCLES

It has been abundantly shown that individual business cycles vary among themselves. We shall nevertheless attempt, in the remainder of this chapter, to sketch the processes involved in a "typical" business cycle fluctuation. We shall treat the various phases of such an idealized cycle in their conventional order, i.e., revival, expansion, recession, and contraction.

Revival from a depression may be brought about by a variety of alternative happenings. New inventions may require large-scale new investment for their commercial development; an increased demand from overseas may stimulate the nation's export industries; the exploitation of a new gold field may expand the money supply and raise prices; or possibly the mere business of replacing industrial equipment, postponed during bad times, can no longer be delayed. To discover just what was the initiating impulse in a given cycle may be a difficult task for historical research; yet the wide variety of possible sources of stimulation is evident.

The period of expansion, as was shown by the charts we have just examined, is characterized by increasing employment and production, although not every line of business begins to experience such increases at the same time or to the same extent. Some firms—and sometimes whole industries—may not enjoy such increases at all, but most firms tend to be favorably affected. For these firms a period of expansion brings larger orders and sales, and thus an increase in their money receipts. This provides, of course, an incentive to increase output, for only by so doing can the firms take advantage of the favorable market conditions. To the extent that this increased output can be produced without additions to a firm's mechanical equipment, its principal responses to the stimulation consist of hiring more workers, purchasing larger amounts of raw materials, and using its plant and equipment to a degree more nearly approaching full capacity. The impact of such a

movement on the market for labor and materials is, in its turn, strongly stimulative.

However, if the expansion in activity continues for some time, it may be necessary for many firms to undertake substantial investment to enlarge plant capacity. This investment involves the replacement of old equipment that has deteriorated through physical wear and tear, or that, while still technically useful, has been rendered obsolete by newer methods. Also, the investment may result in a net addition to the operating capacities of the firms. This investment activity, a typical characteristic of the expansion phase, means additional business for those firms producing capital equipment, and for all those extractive and processing industries that provide the raw materials used in its production.

There is, of course, a tendency for the incomes and expenditures of both producers and consumers to increase during a period of expansion. The incomes of consumers increase as firms pay out larger amounts in salaries, wages, and dividends; the incomes of producers, i.e., of business concerns, rise as sales increase. These two quantities tend to rise not only because of increases in employment and the physical volume of sales, but also because there is a tendency for wage rates and prices to rise. These latter changes are most likely to assume important roles, however, in the later stages of the expansion.

HOW EXPANSION PERMEATES THE ECONOMY

It is important to note that an expansionary impulse, although it may be felt first at a specific point in the economic system, tends to spread throughout the system. This can be illustrated by a simple, and fairly typical, example. Suppose that there occurs a 10 per cent increase in the demand for automobiles. This causes increased sales prospects for automobile manufacturers, who will respond by increased output, which requires larger expenditures on materials, equipment, and labor. When this increased demand is focused on automobile manufacturers, they respond by demanding a wide variety of materials and services from a great many other producing units. The employees of these producing units, through the expenditure of their increased volume of income, will carry the impact to a still more diversified group of producers of goods and purveyors of services. Thus a localized impact is spread, through the market, to the wider reaches of the economic system. The more highly developed the business system—that is, the more closely related its parts—the more rapidly is this effected, and the more likely is the infectious spread of "good business" to carry all

in its upward surge. Furthermore, we shall see later that the initial expansionary impulse, such as an increase in demand, may become accelerated as it is passed along through the economic system. Such cumulative forces are characteristic of both periods of expansion and periods of contraction.

PSYCHOLOGICAL FACTORS IN THE PHASE OF EXPANSION

Another important feature of the expansion period is the feeling of confidence among businessmen which may become, at some times and in some circles, an attitude of rosy optimism toward the business outlook. This psychological wave, if and when it appears, encourages businessmen to increase their expenditures. It also stimulates consumers to make purchases of some goods, especially durable goods, that they were reluctant to make when the outlook was less favorable. It is difficult to objectify this quality in the climate of business opinion and hence it is difficult to measure it. That it is an important part of what has been called the "natural history" of the business cycle is clear, although the mechanics of its operation are not easy to describe. It manifests itself largely in what may be termed an increased willingness of the business community to undertake commitments—commitments, that is, that are increasingly large in terms of their dollar amount, that reach farther and farther into the future, and that concern more and more "risky" ventures.

It should be noted that, in a rather important sense, this psychological wave of business optimism can provide its own justification. That is, if a preponderance of businessmen believes that conditions of business are going to improve, and if they take appropriate steps—buy for inventory, hire workers, install new equipment, etc.—their steps will, by providing others with a positive reason for expansion, create the very conditions that were anticipated. This is not to argue either that everlasting prosperity can be created by always expecting it (and always acting on expectations) or that once an expansion is started it will never stop. The point is that optimism, in the long run excessive, may for a time be justified by events. Such errors of optimism may prolong the expansion, and lead in turn to exaggerated pessimism when the recession arrives.

HOW EXPANSION IS FACILITATED BY BANKS

The banks play an important part in the cumulative process of expansion. Borrowers become more willing to borrow and lenders become more willing to lend; credit is easier to obtain and, possibly, can be had on more

favorable terms. For business concerns, this means that lenders (i.e., commercial banks and other institutions that extend short-term credit, and financial concerns and individuals supplying intermediate and long-term credit to business enterprises) are ready to provide funds for purposes which they might at other times think too risky, and that these funds are forthcoming on more favorable terms than previously applied. For consumers, it means that more people are able to borrow as individuals' incomes rise, that they can borrow larger amounts, and that the terms of their financing contracts becomes less onerous. The improvement in terms appears as lower down payments are required on goods bought on the installment plan, and as the period over which payments are to be made comes to be lengthened.

Faced with an expanding demand for credit, the banks—in so far as their reserve position allows—usually lend more to their customers. That is to say, they extend fresh loans in excess of the current repayments of old loans. Since, as we shall see in a later chapter, loans create deposits, the public's spending power is enhanced. Businessmen and consumers may decide, in the light of a general improvement in business conditions, to draw more freely on their bank-deposit balances. Thus occurs an increase in what is termed "velocity of circulation," that is, deposit balances are turned over more rapidly. So it happens that the volume of expenditures, both by producers and by consumers, is swollen, and economic expansion is stimulated, partly through an increase in bank deposits and partly through a rise in people's willingness to spend them. Increased spending by individuals and by business leads, not only to greater output and employment, but to higher prices and larger profits.

CUMULATIVE FORCES IN EXPANSION

As pointed out above, the widespread specialization and interdependence of activity in our economy, makes it inevitable that an impulse, whether towards expansion or contraction, if felt in one division of industry and trade, will spread to other divisions. What is not so obvious is that an expansion (or contraction), once under way, has a tendency to "feed upon itself." For the strength of the initial impulse, as it spreads throughout the system, tends to grow *cumulatively*. As to why expansion is cumulative in nature, some hints have already been given: we have seen how errors of optimism may temporarily produce their own justification; we have seen also how rising prices lead to larger profits, which in turn encourage further borrowing from banks, and—with enhanced spending—lead to still higher prices. Another illustration of this same tendency may now be given.

The acceleration principle. Suppose a railroad has 1,000 locomotives lasting, on the average, 20 years each. If the demand for transportation were steady, and all the locomotives were in use, the railroad would obviously order just 50 new locomotives each year to replace those junked. But, of course, the demand for transportation is not steady. Consider the situation of the railroad at the end of a period of business contraction. As traffic shrank, it was able to get along with less motive power than usual. Suppose that, by failing fully to replace units junked, it has allowed its stock of locomotives to decline to 950. At this point comes a revival in general business. The railroad, let us suppose, again needs its full complement of 1,000 locomotives to handle the traffic. During the year immediately following the revival in business the road must purchase fifty units to replace those currently junked, and in addition fifty more to replace those junked but not replaced in previous years, making 100 in all. By the end of the year its stock will again number 1,000.

Let us now look at the impact on the locomotive-building industry. Orders for new locomotives, so far as this railroad is concerned, have jumped suddenly from nothing (or almost nothing) to twice the normal replacement rate. Locomotive builders must hire more labor and purchase more materials; in turn more incomes will be distributed and more will be spent for consumers' goods. But these materials and these consumers' goods must be transported: hence more traffic for the railroad. By the end of the year, although its locomotives again number 1,000, these are now found to be insufficient, and the number must be increased to 1,100. One hundred additional locomotives are ordered for delivery during the succeeding year making, with 50 for replacement, a total of 150. So it happens that a rise in the level of *traffic* from perhaps 10 per cent below normal to 10 per cent above normal during the course of a year or so has led to an increase in *orders for new equipment* from much less than normal to three times the normal rate. These considerations, which are sometimes known as the "principle of acceleration," go far to explain why the output of durable goods fluctuate so much more violently than the output of nondurables.

Proportions of profits. Many cases may be noticed during the course of the business cycle of the magnified effects of small initial changes. To cite another example, a 10 per cent increase in prices may result in a 20 or 30 per cent increase in the profits of the seller. In a more general sense a small percentage rise in prices may have cumulative effects if it inspires an expectation of further price rises, stimulates more active purchasing and thus, at an accelerating pace, leads to further price increases.

We should notice, finally, that most of the forces described act in similar fashion, but in an opposite direction, when contraction rather than expansion is the order of events.

WHY EXPANSION COMES TO AN END

Thus far we have dealt with some of the main features of a period of expansion. Why should an expansion in business give place to recession and contraction? It should be said at once that our understanding of the mechanisms at work in transition phases of the business cycle (i.e., the change from expansion to contraction and vice versa) is much less complete than might be desired. With the knowledge we possess today we can give a fairly satisfactory account of what happens during expansions and contractions in general business. To explain just why expansions and contractions come to an end, reverse themselves, and give place to their opposites, is much more difficult. Some general conclusions can, however, be stated with confidence.

In the first place, there seem to be neither theoretical nor historical grounds for arguing that the factors primarily responsible for shifts from expansion to contraction (or from contraction to expansion) are the same on every occasion. It may be an external factor in one cycle, such as a change in public-spending policy; it may be the effects of the bankruptcy of some important financial institution that touch off the transition in another cycle; or it may be overexpansion in some strategic trade or industry. Clearly, also, a particular transition is more likely to start from a combination of circumstances, the components of which vary, than from some single cause. One thing is certain: the particular set of market relationships that characterize the turning period have their antecedents in, and develop out of, the preceding period of expansion (or contraction). A good many conditions can be listed that *might* serve as factors causing initial expansion or contraction, but each cycle must be examined carefully and objectively to secure accurate understanding.

CHARACTERISTICS OF RECESSION

Probably the most significant feature of a recession in business is a slackening in orders for new equipment, i.e., a reduction in investment expenditures. Such a change bespeaks a decline in the prevailing optimism, a less rosy view of the future. Expectations of profit are revised downward. We should, therefore, examine factors which may be expected to eat into

the prevailing high profits of the expansion period, and seek for ways in which these high profits may contain the seeds of their own disappearance. Obviously profits may decline either because of slackening sales, increasing costs of production, or through a combination of both.

Let us first consider what features of the expansion may lead ultimately to a slackening of growth, or an actual decline, in the sales proceeds of firms. After a period of expanding revenue growing out of increasing sales (perhaps made at progressively higher prices), a firm's total receipts are likely to slacken their rate of growth; this is especially the case when previous increases are traceable to purchases which were postponed during the depression which preceded the current expansion. For obvious reasons booms immediately following the close of wars tend to have this character; the expansion which culminated in 1920 is often described as a "restocking boom." Automobile purchases are a good example.

People buying new automobiles, whether to replace old cars or to obtain their first cars, are more likely to make purchases when their economic prospects show signs of improving. Because their relatively long-service life permits of it, purchases of automobiles and goods of like durability can be postponed for some time. A period of expansion, therefore, will be based in part upon the final execution of postponed purchases. Not only is this true of the behavior of consumers but it is also true of business purchasers. To some extent, of course, consumers buy cars, or other durable goods, and producers buy equipment and materials for making such goods, even during periods of contraction; but purchases of durable goods tend to be concentrated most heavily in periods of expansion. Clearly, it is this concentration of purchases that *constitutes* expansion. But, once fulfilled, these needs for durable consumers' goods and producers' equipment are satisfied for some time, and no longer serve as a source of increasing revenue for the firms producing the durable goods. Let us suppose that the railroad, used as an example in an earlier paragraph, finds that its new stock of 1,100 locomotives will meet all foreseeable needs: new orders for locomotives will then decline from 150 to 50 (or, more accurately, 55) yearly—i.e., to the normal replacement level. Locomotive builders will lay off employees and cancel orders for materials.

INFLUENCE OF COSTS AND PRICES ON RECESSION

A further factor must be noticed. During the boom, in anticipation of higher selling prices or to protect themselves against higher costs, businessmen tend to buy more than they sell, and so build up their inventories

While inventories are increasing, current production will outstrip current consumption. But this cannot continue indefinitely, for sooner or later lack of cash or the mere problem of storage will prevent further accumulation.

Here, then, are two factors—the gradual playing out of postponed replacement demand, and the eventual slackening of inventory demand—that may operate to cause the gross receipts of producing and selling firms to increase less rapidly, possibly to decline in absolute amount. Furthermore, the decline in orders experienced by one firm is reflected quickly in its demands for the products and services of other firms. Clearly, then, a stimulus working toward contraction and operating through a reduction in sales (or through a reduction in the rate of growth of sales) can spread infectiously throughout the system. Its impact is carried to all places by the intricate relations of market prices.

From the side of costs, several important forces which may act to turn expansion into contraction can be noted. As a period of expansion proceeds, the costs of different types of workers, materials, and equipment may rise because of the competitive bidding of rival users. In particular, as employment expands, shortages of individual skills may develop. Moreover, the growth in unfilled jobs and the decline in the number of jobseekers may, since it boosts the bargaining power of labor, lead to a general rise in wage rates. As costs rise, producers are likely to raise the prices of their own product and, to the extent that their product is used by other producers, the latters' costs are raised by this act.

In short, forces operating from the sides of both business receipts and business costs may, taken together, cause profits to decline or turn into losses. The banking system may play a part here too. If rising business activity, or speculation in commodities or securities, should draw so much cash into circulation, or so expand credit, that the banks run short of reserves, they may deliberately initiate a credit restriction by raising interest rates and thus increasing another business cost.

In general, the turning period is one in which, in some important lines of industry and trade, the stimuli making for expansion (contraction) come at last to be counterbalanced by forces making for contraction (expansion). The recession which brings to an end a business expansion may or may not be accompanied by a financial crisis, involving widespread business failures and general financial liquidation. The tendency of cyclical peaks in business to be accompanied, or immediately followed, by financial panics has been less noticeable since the Federal Reserve System was established in 1913.

THE PERIOD OF CONTRACTION

Once begun, contraction may proceed very rapidly. Indeed, the declines in business seem characteristically to be precipitous as compared to the fairly moderate pace of expansions. The reason doubtless lies in the fact that while buyers, both of producers' and consumers' goods, may curtail orders immediately and completely on very short notice, they are likely to increase buying tentatively at first and never with as great rapidity as it can be contracted. Also, producers can respond quickly to a decline in orders, whereas an increase requires considerable planning and other preliminaries.

The general characteristics of the period of declining activity are the opposite of those which describe a business expansion. There is a sharp decline in physical output, particularly in the so-called heavy industries and in the industries producing durable consumers' goods. This sharp decline in output is caused, directly, by a reduction in the demand for the goods involved; its result is an increase in unemployment and a decrease in the demand for all the materials that normally are bought for the use of the stricken industries. So the contraction spreads through the system, with the same tendencies to cumulative results that we noticed earlier.

As investment falls off incomes decline, and as incomes decline consumers spend less. With reduced spending by firms and individuals, prices fall. The prices of some commodities, being more sensitive, decline quickly and drastically; others, being rigid, decline little; there are still others which may not fall at all. Wage rates tend to decline, but the most sudden impact is on the volume of employment and thus on the total payrolls of trade and industry.

From the side of credit, there is a tendency for loans to decline as they are paid off by previous borrowers, and lenders become more careful in the extension of new loans. The net result is an excess of repayments of old loans over new loans, and thus another contracting force is added to the situation.

The cumulative forces of contraction, once started, carry business conditions down to a level from which recovery may be slow and tortuous. When it does occur, it is likely to take the form of a series of fitful starts and stops rather than a steady improvement. Of the many different factors which may initiate a business revival, several have already been noticed. As with recession, revival may be featured by quite different circumstances at

SINESS CYCLES AND PUBLIC POLICY

Business cycles have inflicted very heavy social costs on modern in-
strial economies. The costs have taken the form of lost opportunities and
ısed human and physical resources. Society as a whole has foregone large
ounts of income which it would have earned and spent had the average
el of business activity been higher than it actually was. In addition, the
; of income was largely inflicted upon those persons least able to bear
burden, for the lowest-paid and poorest workers (being often the least
:ient) are the first to lose their jobs in times of business contraction.
:se evils are obvious, indeed, and it is not surprising that many proposals
uld have been made with a view to mitigating the social effects of busi-
; fluctuations. A detailed discussion of proposed measures would be out
)lace in this chapter, but brief mention can be made of some of the
ımoner suggestions.

The part played by the banks in supplying additional means of pay-
ıt for financing business expansion has led many students to suggest that
ness might be stabilized by monetary measures. Expansions in business
ıld be checked by credit restriction before speculation develops; con-
tions should be fought by cheaper and more ample credit. Although the
:er is still somewhat controversial, the modern view is that the power of
banking system to influence business conditions is not as great as was
ıerly thought. More attention will be given this topic in a later chapter.
Because recession is commonly initiated by a downturn in business ex-
litures for investment purposes, much consideration has been given to
possibility of stabilizing investment. It has been suggested by many
:rs that public investment, for instance in highway construction and
ırce development, should be concentrated in periods of contraction, so
"take up the slack" in private investment. It is thought, too, that if a
ne in total investment—public plus private—could be prevented, the
ılative tendencies to contraction, which carry recession into depression,
t be greatly weakened or entirely checked.

More revolutionary proposals would convert the entire system of gov-
ent finance into a weapon for ironing out the business cycle. When-
private spending—business or individual—declined, government would
n, and either increase its own spending or make tax refunds for the

public to spend. Business expansions would be curbed by the converse process: public spending would be cut, and taxes increased. Whether such a proposal would lead to the balancing of the budget over the period of a complete business cycle, or whether successive deficits would lead to steady increases in the public debt, has been widely debated.

These various proposals—whether or not they would work in practice—all have as their object the maintenance of a high and stable level of business activity, uninterrupted by cyclical fluctuations. More modest—or less optimistic—proposals have sought, not to control or even eliminate cyclical swings in business, but to alleviate directly their worst social consequences. The most important of these measures, introduced in consequence of the exceptional severity and duration of the contraction of 1929-33, are undoubtedly the unemployment compensation features of the Social Security Act of 1935.

SECTION FOUR

ORGANIZATION AND CONTROL OF PRODUCTION

10 The corporate enterprise

11 The trend toward big business

12 Monopolies and public policy

13 Public regulation of monopoly: the case of electric power

SECTION FOUR

ORGANIZATION AND CONTROL OF PRODUCTION

INTRODUCTION

Our productive system is composed of a multitude of enterprises. Each unit is separately owned and operated. In fact, we define a "business enterprise" as a fairly permanent establishment which seeks to make profits through buying and selling, is owned by one person or by one group of persons, and so is subject to a single set of operating policies. In the United States productive activities are predominantly in the hands of business enterprises. This fact distinguishes our economic system from all others, real or hypothetical. Thus, in a state of socialism, there would be, in theory at least, no division of industry by ownership into separate units; the entire productive system would be owned by the community at large and operated by the state.

The organization of our productive system into many units, separately owned and operated, is a primary cause of many of our economic problems. In a socialistic state there would undoubtedly be another—and a different—set of problems. In the kind of system we have, countless adjustments and co-ordinations have to be made. Thus it is necessary for each unit to buy materials or finished commodities, to employ workers having specialized skills, to acquire capital, to secure an almost endless variety of services and facilities, and to sell its products. But as regards the economy as a whole, there are still other needs for co-ordination and adjustment. Workers must be able to secure employment, suppliers of capital must be able to use it in accordance with their own interests, and consumers must be in a position to buy the kinds of goods they want at the time and place they want them. These several necessities are worked out, and conflicting requirements

reconciled, through market transactions. The state participates principally through enacting and administering laws which limit or regulate these transactions.

Thus for the adjustments and co-ordinations that are needed for effective production, and for the optimum employment of productive resources, we are dependent principally upon the interplay of private and separate interests in the market.

From this point of view, our "economic army" appears to consist of a few captains, many lieutenants, and a multitude of privates, without any generalissimo or headquarters staff. Each unit is more or less well organized and more or less ably commanded. But the supreme authority necessary to any well-articulated army is lacking. The law defines—frequently in rather vague terms—the sectors in which all and each of the units may operate. But whatever degree of co-ordination exists among the various enterprises is brought about by negotiations and transactions among the enterprises themselves.

As we saw in Chapter 8, the economic welfare of the community is determined by two conditions: first, the amount and character of goods produced; and, second, the way in which these goods are distributed among the members of the community. Thus the basic requirements are: (1) Adequacy of production (in the sense both of giving goods the forms that are wanted and of having them available when and where people want them); and (2) adequacy and stability of the incomes received by individuals and family groups. The relevant facts on both production and income were set forth in the preceding three chapters.

In the United States most goods are produced, and most incomes disbursed, by business enterprises. How much they produce, and how large a quantity of income they disburse, are questions that can only be decided by each enterprise for itself. An enterprise tends to maintain a given scale of operation (i.e., to produce a given volume of output and to disburse a given quantity of income to suppliers of productive resources) only when and because its profits are largest—or its losses least—through maintaining that scale. This is no disparagement of the social-mindedness of businessmen; it is merely an acknowledgment that the rules of business compel such consideration.

Private business enterprise is sanctioned by the community on several grounds; one is that it promotes general material welfare. To each participant, it is, at the same time, a means of acquisition. There is no complete certainty that the two objectives will coincide. This section is concerned

primarily with how enterprises are organized, how they operate, how they attempt—in some important particulars—to control the markets in which they sell and buy. Later sections will deal with the relations of business concerns to the financial system, to wage earners, to farmers, to consumers, to the financial affairs of government, and to economic dealings among nations.

CHAPTER TEN

The corporate enterprise

THE FORMATION OF AN ENTERPRISE

Each business enterprise comes into existence through commitments of capital. Some person or group of persons invests funds in it. The motive is that investment in this particular enterprise offers a prospect of larger or surer profit to the investors than any alternative available to them. This prospect of profit is something that exists in the minds of the investors. Whether the enterprise actually yields a profit or not can be ascertained only after it has operated for a time. The amount of its profit (or its loss) will be determined by the amount by which, in a period of time, the total income of the enterprise exceeds its total costs of doing business (or vice versa).

Thus the prospect of profit, before the enterprise is created, is entirely a matter of opinion—or, as we sometimes say, of speculation. But after the commitment of capital, successive decisions have to be made concerning the scale of operation and other conditions that will cause the concern to yield the largest possible amount of profit. Operating policies normally are directed to this end. As a matter of fact, they have to be, since the continuance of the owners' possession of the concern depends upon the concern's ability to pay what it owes out of what it receives. Any income above this requirement constitutes a profit for the owners of the enterprise. Thus the main interest and motive of business enterprise is in making ends meet and having as much as possible left over as profits from operation.

How this motive works in practice may be seen by reference to a typical case. Let us suppose that we have organized a corporation for the purpose of making and selling bench-made shoes. Suppose further that on January 1, 1949, we pay in to the corporation $100,000 in return for its

capital stock. With this sum the corporation purchases a factory, equipment, and materials for making shoes. After a year of operation we wish to learn the status of our business—to find out what the concern has and what it owes. Because, for business purposes, we attribute money values to things, we are able to reduce the entire business to money terms. And what we learn is shown in the balance sheet (or statement of condition) below.

BALANCE SHEET—BLANK SHOE COMPANY, INC.
(at close of business, December 31, 1949)

ASSETS		
(what the concern owns or has owing to it)		
Fixed		
Land and buildings	$ 50,000	
Machinery and equipment	25,000	
		$ 75,000
Slow		
Accounts past due		5,000
Current		
Cash on hand or in bank	$ 20,000	
Notes receivable	1,000	
Accounts receivable	40,000	
Inventories (goods on hand)	50,000	
		111,000
Deferred		
Prepaid insurance		1,000
Total Assets		**$192,000**
LIABILITIES		
(what the concern owes to others, including its stockholders)		
Current		
Accounts payable	$ 40,000	
Notes payable	30,000	
Reserve for income taxes	8,000	
		$ 78,000
Leaving a Net Worth, owed to stockholders, of		114,000
Consisting of		
Capital stock (amount originally subscribed by stockholders)	$100,000	
Undistributed profit	14,000	
Total Liabilities		**$192,000**

FINANCIAL STATEMENTS OF AN ENTERPRISE

From this balance sheet of our shoe company we learn not only how much our business owns and how much it owes, but also how much of each kind of thing it owns and how much of each kind of debt it owes. What we have is essentially a pecuniary snapshot of the business at a given instant of time—close of business, December 31, 1949. It shows us how much the assets and liabilities of the company are at that instant.

Most assets are either "fixed" or "current." These terms refer to the prospect of converting any given asset into cash—an important consideration in the case of a business which must pay its debts. Thus buildings and equipment are described as fixed because the money invested in them will not be recovered for a long time to come. The current assets consist of cash and of items that will soon be converted into cash. Accounts receivable become cash as they are paid, while goods in inventory will shortly be sold to customers. By deducting the liabilities to persons other than the stockholders ($78,000) from the assets ($192,000) we find that the business had a "net worth" of $114,000. This net worth is of course the property of the stockholders, and represents the book value of their equity in the business. Such a statement can be made at any time from a well-kept system of accounts.

Having learned what the present condition of our concern is, we may wish to know how the business was conducted during the year that it has been operating—how much it received and how much it spent. And in this case we turn to the income statement (or profit and loss account) on the opposite page.

The income statement is a history, in pecuniary terms, of our business during its year of operation. It tells us not only how much money the business has received and how much it has spent, but also the sources of income and the purposes for which expenditures were made. Several relationships are shown which furnish important information regarding the character of the business. For instance, by separating our expenses into "cost of goods sold" and "fixed expenses," we learn that $87,000 was spent for the conduct of the business as a whole, without reference to the volume of goods produced or sold. That is to say, these "fixed expenses" would have been about this amount even if the firm had produced a good bit less or a good bit more. It also will be observed that "manufacturing labor" is the largest single expense of the business—larger even than "materials used during year." This relatively large proportion of labor costs is characteristic of

BLANK SHOE COMPANY, INC.

(Income Statement for twelve months ending December 31, 1949)

Sales during year		$300,000
Cost of goods sold		
Inventory at opening of business, January 1, 1949	$ 30,000	
Materials bought during year	90,000	
	$120,000	
Less inventory at close of business, December 31, 1949	50,000	
Materials used during year	$ 70,000	
Manufacturing labor	110,000	
Electric power	3,000	$183,000
Gross profit (excess of sales over cost of goods sold)		$117,000
Fixed expenses		
Rent	$ 10,000	
Managerial and office	20,000	
Advertising and selling	30,000	
Property taxes	1,000	
Insurance	2,000	
Interest	3,000	
Depreciation	6,000	
Repairs	2,000	
Miscellaneous	13,000	$ 87,000
Operating profit		$ 30,000
Nonrecurring items		
Deduct Bad debts	$ 3,000	
Deduct Fire loss	7,000	
Add Profit from sale of real estate	2,000	8,000
Net profit before income taxes		$ 22,000
Federal corporate income tax		8,000
Net profit after income taxes		$ 14,000

most enterprises producing articles made by hand. Most significant of all is the final item. From it we learn (let us assume with some satisfaction) that we have made a net profit after federal income taxes of $14,000, or 14 per cent on our original investment. The "matter of opinion" which led us to invest our funds in this shoe manufacturing concern has in this case been amply justified in fact.

We have taken the time and trouble to examine the balance sheet and income statement of our imaginary industrial enterprise for three reasons: first, because they depict so graphically the pecuniary character of modern business; second, because they are devices much used by business itself; third, because they lay emphasis on the essential motive of business—net profits. To illustrate these matters we have imagined a relatively small and simple business enterprise. Larger and more complicated enterprises have more elaborate financial statements—as well as more involved implications for our economic life. The general causes and effects of "bigness" in business enterprises will be studied in later chapters.

CHARACTERISTICS OF MODERN ENTERPRISE

Business enterprises either (1) buy things in order to sell them, or (2) buy things in order to convert them into something else, with a view to selling this final product. The first of these, buying things in order to sell them, is much the simpler activity. It involves the ordinary operations of commerce. Dealers in goods, either at wholesale or at retail, conduct their business in this fashion; they seek to profit through buying goods where and when they are cheap and selling them where and when they are dear. The goods that are sold are physically identical with the goods that are bought—although superficial changes may have been made in the appearance of the goods by labeling them or by putting them up in special packages. Commercial enterprises must, of course, buy many things besides the goods that they sell. They must, for example, employ the services of buyers, of salesmen, and of other workers who do a variety of necessary things; they must pay for advertising, and make all the numerous other kinds of expenditures essential to the business of merchandising.

The second, and more complicated, kind of activity—buying things in order to convert them into something else—is characteristic of industrial (as distinguished from commercial) operations. Manufacturers of goods, and firms that render various kinds of service (such as transportation and communication), conduct their business in this fashion. A steel-manufacturing concern, for example, buys many kinds of machinery and equipment, a

number of raw materials, the services of workers possessing various abilities and skills, and numerous facilities necessary to its operations. As a result of these expenditures, it is able to make and sell a fresh commodity—steel—entirely different from anything that it buys. The differences between what is bought and what is sold are equally marked in the case of a railroad company or of a manufacturer of furniture.

It must be sufficiently clear that every business enterprise is founded and operated with a view to making profits, or at the very least to avoiding losses. Avoiding losses, like making profits, necessarily involves prices and costs; losses may be reduced, just as profits may be increased, either by raising prices or by lowering costs. Sometimes the only way in which costs can be sufficiently reduced to meet either a reduction in the price at which a concern can sell its product or a decline in its volume of sales, is through bankruptcy. When bankruptcy occurs, one effect will be to reduce the firm's "capital structure" and so to bring about a reduction in its fixed charges—in this case the price it pays for the use of its capital.

GOING-CONCERN VALUE

This brings us to a particularly important consideration with regard to modern enterprise. Business concerns today, like the services and materials which they buy and the services and commodities which they sell, tend themselves to have market values. A concern that is making relatively large profits from operation will have its own value enhanced as a result, whereas a firm that is making profits that are low in relation to the amount invested in it will suffer a loss in its own market value.

Let us consider again for a moment the case of the Blank Shoe Company, Inc., whose creation and first year of operation have been described. The company was established by an investment of $100,000. Its net profit at the end of its first year, after provision for corporate income taxes, was $14,000. A return of 14 per cent on an investment is high. It is doubtful if the people who own this concern would be willing to sell it to new owners at a price as low as $100,000, the amount they originally invested in it. Suppose the market for investments at this time is such that the return to be derived from other employments of capital with equal security of return is only 5 per cent. In that case, the owners of the Blank Shoe Company probably would want a price of about $280,000 for their business. At the same time the opportunities for alternative investment being what they are assumed here to be, prospective buyers probably would be willing to pay an amount up to about $280,000 for the going concern. All of this

assumes, of course, that the prospects of the Blank Shoe Company's continuing to earn about $14,000 a year appear, both to the present owners and to prospective buyers, to be favorable.

If, instead of earning a net profit of $14,000 in the first year of its operation, the Blank Shoe Company had suffered a loss of, say, $2,000, the value of the concern would be adversely affected by this changed condition. Its "going-concern value" might be less than $100,000, the amount originally invested. If the prospects were that such losses would continue indefinitely, the Blank Shoe Company probably would have no "going-concern value" at all. In this case the only assets that it would possess would be simply its physical equipment and inventory of goods on hand. Some other shoe manufacturing company might buy these things to use itself, but the Blank Shoe Company, as a business entity, would tend to be extinguished.

The "going-concern value" of a corporation is reflected in the price of its stock. Where shares in a corporation are traded on organized stock exchanges, variations in the outlook for its future profitable operation constitute one cause of day-to-day changes in quotations for its shares.

THE ADMINISTRATION OF COSTS

Why are some businesses profitable, others unprofitable? Why do some firms flourish, others lose their stockholders' capital? Unquestionably the results experienced by individual enterprises are often due to luck. One firm's product catches the public fancy; another's is soon superseded by the product of a rival. Yet management is also an important element in business success. Many small businesses are managed by their owners. When a business is incorporated, it frequently is managed by the principal stockholder. In the case of large corporations, where no one individual owns more than a small proportion of the stock, the operation of the business commonly is in the hands of hired managers. What kinds of decisions must management make? What are its functions? How does it spend its time?

Profits will be earned to the extent that aggregate revenues exceed aggregate costs. Consequently, the firm will be profitable and its management will receive congratulations to the extent that costs are kept down and revenues kept up. Managerial decisions relate both to what the firm buys and the prices it pays, and also to what the firm sells and the prices it receives.

Effective administration of costs requires first of all an appropriate pportionment of outlay among the various necessary factors of produc- ion. In the case of the fixed capital of a railroad, for example, a balance hould be maintained among expenditures for equipment so that the mounts of main line track, of sidings, of freight yards, of terminal facili- ies, of locomotives, of rolling stock, and of maintenance equipment will e in such proportion to each other as to yield the most economical total peration. With regard to the operating expenses of a railroad, it means hat the amounts spent for the employment of brakemen, switchmen, en- ginemen, maintenance workers, and other employees should be in the pro- portions necessary for most economical operation, and that the amounts pent for fuel, electric power, and the numerous essential services and facili- ies should be apportioned so as to assure the greatest economy in relation o volume of traffic borne. In this view, economy of operation refers to he *best proportions* of the various costs to each other in terms of operat- ng efficiency as well as to actual lowness of total costs.

Let us consider this same problem from a slightly different angle. Sup- pose that a railroad company is considering the installation of automatic couplers on its cars. To install this new kind of coupler will require a con- siderable capital outlay and will give rise to fixed charges due to interest on the capital funds invested in the new couplers. The company will, at the same time, be able to dispense with the services of some number of its employees, and to this extent will be able to reduce its operating expenses. Whether the company will decide to purchase and use a full equipment of the automatic couplers will depend on its judgment of whether the added fixed charges due to their purchase will be greater or less, in a long period of time, than the operating expenses due to the use of their existing equip- ment of manually operated couplers.

The administration of the costs of a business enterprise entails constant attention to problems such as these. Effective administration of costs works always towards reducing the cost per unit of production or the cost of conducting a given volume of business. Management must continuously decide, in the light of shifting market situations, which material or com- bination of materials will make a satisfactory product at least cost; whether the customer will or will not be willing to pay more for this or that refine- ment; what improvements in manufacturing processes might or might not be worth while. In the case of a particular "going concern," of course, its existing physical plant and equipment set a fairly rigid pattern. This means that the scope for managerial discretion is more limited, i.e., the choices

open to management are fewer, in a going concern, than they are when a new business is about to be created, or even when a major program of replacement or expansion is in question.

THE ADMINISTRATION OF PRICES

Along with the interest of each business enterprise in keeping its costs as low as possible, is its parallel interest in keeping selling prices for its products or services as high as is consistent with optimum operating economy. In many fields of business a conflict arises between these two interests. In those fields in which optimum economy can be achieved only by the use of mass-production methods, it frequently is necessary to charge a low price for the product in order to maintain a large volume of business. Thus low costs and high prices, as ways of securing and maintaining profitable operation, tend in some degree to counteract each other.

In order for a business concern to charge relatively high prices, it must necessarily have some degree of control over the market in which it sells. The highest degree of such control is exerted by a monopoly. Where a single firm provides the entire supply of its commodity or service in a particular market, the ability to charge high prices is especially strong. Often, where the product is supplied by a small number of firms, tacit understandings or a common dislike of "price-cutting" enable control of price to be only slightly less effective than in the case of a single monopolist. On the other hand where there are already numerous sellers, or where fresh competition may easily spring up, any one firm has but slight opportunity to influence the price at which it sells.

THE PREVALENCE OF CORPORATIONS

The Blank Shoe Company, whose finances were examined earlier in this chapter, was assumed to be organized as a corporation. Of the three forms of business organization, the individual proprietorship, the partnership, and the corporation, the last-named has become increasingly important. This trend shows itself not only through increases in the numbers of business corporations, but also through increases in the size of corporations relatively to the other two forms of business enterprise. As regards sheer numbers, Bureau of Internal Revenue data show that there were in this country, in 1941, 454,000 partnerships and 509,000 business corporations. As regards the extent to which corporations dominate in various fields of industry Table 13 throws significant light.

Table 13 RELATIVE IMPORTANCE OF CORPORATE ACTIVITY, 1937

Industry	Share of national income	Business done by corporatio
Agriculture	8.9%	7%
Mining	2.1	96
Electric light and power and manufactured gas	1.6	100
Manufacturing	24.0	92
Contract construction	2.1	36
Transportation	7.3	89
Communication	1.3	100
Trade	12.5	58
Finance	9.3	84
Government (including work-relief wages)	13.5	58
Service	11.9	30
Miscellaneous	4.2	33
Total (or average)	**100.0**	**63**

It will be observed that the dominance of corporations has become complete, or nearly so, in the five important fields of manufacturing, finance, transportation, mining, and public utilities, which among them accounted in 1937 for 45 per cent of the national income. Among all of the fields, agriculture alone shows an overwhelming preponderance of non-corporate enterprise. But even that traditional stronghold of the individual proprietor and self-employed worker has been taken over by corporate enterprise to the extent of 7 per cent within the past few years.[1] Willard Thorp, in his testimony before the Temporary National Economic Committee in 1938, estimated that between 60 and 65 per cent of the total volume of business in this country is done by corporations.

THE CORPORATE ORGANIZATION

A corporation may be defined as an artificial person created by law, endowed with certain of the rights and privileges of natural persons, and employed to carry on an enterprise with an entity separate and distinct

[1] The percentage of the agricultural field in the hands of corporations which is given here includes only farms which are *operated* by corporations. A much larger proportion is *owned* by corporations, including insurance companies, banks, and mortgage companies.

from the natural persons who are members of it. The corporation owes its existence to the fact that, from the point of view of private business, it possesses certain great advantages over other forms of business organization.

The corporation has been well described as above all else a capital-raising device. Once this fact is grasped, its predominance in the modern industrial structure is easily explained. Its prototype, the joint-stock company, was called into existence in the late sixteenth and early seventeenth centuries for just this purpose. At that time European trade with the Far East and with the newly discovered lands in the West offered exceptional opportunities for profit, but these profits fell chiefly to those who learned how to organize the business on a relatively large scale. Since very few individuals possessed the necessary resources to enter this trade independently, the joint-stock company was introduced. By splitting ownership into a great many shares of capital stock, the small resources of many individuals were gathered into the hands of the active promoters and managers. Division of ownership was achieved without sacrifice of the advantages of unified control and management.

EARLY GROWTH OF BUSINESS CORPORATIONS

Although the joint-stock device grew steadily in popularity during the seventeenth and eighteenth centuries, its full possibilities for business enterprise appeared only as an outgrowth of the Industrial Revolution. Even as late as 1776 Adam Smith believed that "the only trades which it seems possible for a joint-stock company to carry on successfully without an exclusive privilege are those of which all the operations are capable of being reduced to what is called routine. . . . Of this kind is, first, the banking trade; secondly, the trade of insurance in fire and from sea risks and capture in time of war; thirdly, the trade of making and maintaining a navigable cut or canal; and fourthly, the similar trade of bringing water for the supply of a great city."

In other words, Smith was convinced that the joint-stock company was likely to prove less efficient in most lines of business than the individual proprietorship or the partnership. The only exceptions to this rule were, in his opinion, to be found in the monopolies such as the great trading companies of the seventeenth century, and in those competitive enterprises which required large accumulations of capital and which could be conducted on the basis of a standard routine.

The growth of the factory system and the introduction of machine technique in manufacturing did not at first appear to nullify the dictum

set forth by Smith, but seemed merely to widen the field in which his principles would apply. Until the latter half of the nineteenth century the corporate form was slowly adopted by manufacturing industries and was to be found almost exclusively in those businesses, especially in the iron, steel, and textile industries, which required particularly large aggregates of capital and used methods which had become more or less standardized. Most manufacturing enterprises were still conducted on a relatively small scale and did not require a great deal of capital. As a result, in the United States prior to the Civil War, the corporation was limited mainly to banking, insurance, municipal public utilities, and transportation. Of these, transportation offered the most fertile field for the application of the corporate form. The construction of highways and canals early in the century and, later, the building of railways and steamship lines were financed largely by means of the joint-stock device. Even as late as the opening of the present century, dealings in railway securities comprised the great bulk of all transactions on the New York Stock Exchange.

After the close of the Civil War, however, the spread of the corporate form proceeded with startling rapidity. In the first place, large-scale enterprise was no longer limited to a relatively small field. In all branches of manufacturing, the growth in size of individual establishments, the increased use of labor-saving machinery, and the trend toward integration emphasized the advantages of assembling large aggregates of capital under the control of a single management. From manufacturing, the trend toward large-scale enterprise spread first into the wholesale and then into the retail distributive fields. As a result, the corporation became the characteristic organization for big business everywhere in the United States, in Great Britain, and in other industrialized countries.

In the second place, the growing popularity of the corporate form brought to light other important advantages, besides easy access to capital, which it possessed. As a consequence, incorporation was soon adopted in many fields of enterprise—even those in which small concerns predominate—where capital accumulation was of relatively minor significance. Today, although the corporation cannot as yet be termed the characteristic form of small-scale business organization in the United States, the movement in this direction still continues.

THE LEGAL STATUS OF THE CORPORATION

Our discussion of the corporation as a capital-raising device traced its history from the joint-stock companies of the sixteenth and seventeenth

centuries. To understand its legal status, however, we must consider even more remote prototypes. In the late Middle Ages we find, in the city charters granted by the Crown, the earliest examples of the corporate form. Later, various religious and charitable organizations were permitted to incorporate. The charter created an artificial entity which could own, hold, and manage the property of such bodies in perpetuity. In these early examples the charter was regarded as a special privilege conferred by the Crown in order to further public or philanthropic objects.

The idea of public service was still current at the time of the incorporation of the great British colonial trading companies. Although, in actual fact, these joint-stock enterprises were brought into being by the lure of easy profits, in theory they were usually regarded as agencies specially created for the purpose of carrying on missionary and colonization work among the heathen.

The huge profits earned by some of the chartered companies caused many unincorporated joint-stock enterprises to be formed. Lacking corporate status, such enterprises were really partnerships having a very large number of partners—nearly all of them silent. There followed a wild speculation in the shares of these unchartered companies, bringing ruin to hundreds of investors. As a result, Parliament, in 1718, prohibited unincorporated companies from acting as corporate bodies or selling transferable stock.

This prohibition was never strictly enforced; it was repealed in 1825 and a general incorporation act was passed. Under this law the Crown was empowered to grant charters of incorporation without the necessity of a special act of Parliament. Such charters, however, did not carry the privilege of limited liability until the law was amended by the act of 1856. The legislation of that year marked the final step in the transition of the corporate charter from a special privilege granted in return for public-service activities to a general privilege open to all upon payment of a fee. The corporate charter became, in fact, merely a license issued in much the same manner as automobile or marriage licenses are issued today. In the United States, general incorporation acts were passed by most of the states early in the nineteenth century. Since their passage a corporate charter has been granted automatically whenever a group of persons (usually a minimum of three) applies in the proper manner and according to the terms specified by the general law.

The fact that corporate charters are issued by each of the states in this country has led to a general laxness of standards. Because corporations may be assessed special fees and taxes by the states which charter them, a

number of the states have competed with each other in attempting to gain this lucrative business of issuing charters. Every American corporation enjoys the legal right to do business in any state, or all states, in the Union (except in cases where the business of a corporation specifically violates a law of a particular state; e.g., a liquor concern cannot do business in states having prohibition laws). Thus it is possible for a corporation engaged in interstate business to get its charter in any state in which it may own property and conduct business. As with divorces, the states with the easiest rules do the most business. For many years New Jersey was notorious for the laxness of its laws of incorporation; at present other states, and particularly Delaware, appear to be competing very successfully for business in issuing charters. In those states the laws absolve corporations of many responsibilities. Large powers to holding companies, "dummy" directors, and evasion of taxes are abuses attributed to laxness of states in issuing charters. When it is considered that corporations owe their existence to their charters, and that their powers to do business are those which are explicitly granted by their charters, this laxness has serious social implications.

THE CORPORATION AS AN "ARTIFICIAL PERSON"

An individual may do anything not forbidden by law or public policy. A corporation can do only those things which its charter authorizes it to do. Of course, a charter may be phrased in such broad terms that one would find it hard to imagine an act not so included; but the acts of the directors or officers of a corporation may be challenged by a stockholder or by the public authorities, and in any such dispute the power which it is sought to exercise must be demonstrated to exist expressly or by necessary implication.

The modern corporation, in the eyes of the law, is an artificial person which has the right to own and hold property, to buy and sell, to make contracts, to sue and be sued in the courts. By an extension of this legal fiction it has been declared entitled to certain of the privileges and immunities guaranteed to natural persons by the Constitution of the United States. Thus the corporation is treated as a person under the Fifth and Fourteenth Amendments, which prohibit the federal and state governments, respectively, from depriving any person of life, liberty, or property, without due process of law.[1]

[1] The nature of "due process" and "the police power" will be discussed in later sections. The Dartmouth College case (1819) declared a corporate charter a contract

The early common law notion was that a corporation could not be guilty of a crime. As Blackstone put it: "A corporation cannot commit treason or felony, or other crimes in its corporate capacity, though its members may in their individual capacity." The rule today is universally otherwise. If a passenger agent of a railroad should issue a free pass in violation of the Interstate Commerce Act, the corporation, being responsible for the acts of its agents within the scope of their authority, could be indicted. In one instance, the New York Central Railroad was held criminally liable for rebates given to a sugar manufacturing firm. True, a corporation cannot be jailed; but it can be fined and, under sufficient provocation, its charter can be annulled, putting it to legal death.

There is some doubt as to whether or not a corporation can be guilty of a crime involving a wicked and malicious intent. In New York, for example, it has been held that a corporation could not be guilty of homicide. The federal courts, on the other hand, have held corporations guilty of manslaughter, conspiracy, criminal libel, and "knowingly depositing" obscene matter in the mail.

THE FINANCIAL STRUCTURE OF THE CORPORATION

The simplest financial structure is that which was used by the joint-stock companies of the seventeenth century and which is to be found in many small corporations today. In this type there is only one kind of security which represents the entire capital investment. If, for example, a corporation issues one thousand shares of common stock, each share of this stock represents ownership of one-thousandth part of the net worth, or equity, of the enterprise, and the right to receive one-thousandth part of annual or other dividends thereon.

Behind the evolution from this simple type to the highly complex capital structure of many corporations today, two main objectives are to be found. The first has been the desire on the part of the corporate promoters to create types of securities that will suit most perfectly the temperaments of the various different groups of investors, and thereby make available larger amounts of capital. The second has been the desire to obtain

which is not revocable by the state except in the event that the corporation fails to live up to the terms under which the charter was granted. This does not prevent a state from providing in its constitution that no irrevocable charter shall be granted and that all corporate charters thereafter granted shall be subject to the law of the state as amended from time to time. The Dartmouth College case, therefore, is of little practical significance today.

the vast sums necessary for many modern industrial enterprises, and, at the same time, secure and maintain the control of management within the hands of a small group.

Apart from common stock, the principal kinds of corporate securities are preferred stock and bonds. The bondholder lends his money to the corporation for a stated period (e.g., twenty years) in return for interest at a fixed rate. If interest or principal are not paid when due, he can sue the corporation. If the business is liquidated, he has a prior claim upon its assets. Because of these advantages, bonds commonly yield less than preferred or common stocks. The holder of preferred stock is in an intermediate position. Preferred stocks, like bonds, bear a fixed return; yet like common stocks, they confer a right of ownership in the corporation. Preferred stockholders must receive the full amount of their stipulated dividends before any common dividends are paid; yet, unlike the bondholder, the owner of preferred stock cannot sue if his dividend is "passed." Bondholders may not vote at stockholders' meetings; typically, preferred stockholders may vote only if their dividends are in arrears.

PRIVATE ADVANTAGES OF THE CORPORATE FORM

Superior access to capital is, in a broad sense, probably the greatest advantage of the corporate form to the private persons who organize and administer corporations. Since large accumulations of capital are made necessary by modern industrial methods, this may properly be regarded also as an advantage (more or less qualified) to the community. The more important of the other *private* advantages of the corporate form are the limited liability enjoyed by stockholders of corporations, the qualities of corporate securities which make it possible to diversify them and to transfer their ownership, the perpetuity of existence with which corporations are endowed by their charters, the concentration of management which the corporate form gives to the capital invested by large numbers of people, and the opportunity the corporate form gives individuals to evade responsibility.

Limited liability. The phrase "limited liability," as applied to corporations, means that an owner of stock in a corporation is not personally responsible or financially liable for the fulfillment of contracts or other obligations of the enterprise in which he owns stock. The liability of a corporation itself is unlimited; it is required by law to meet its obligations to the full extent of its resources. A stockholder may, of course, lose the entire amount of money which he has invested in the stock of a corporation.

Yet, in the event that a suit at law is brought against a corporation, or it becomes bankrupt, its stockholders—except under certain special circumstances indicated by law—cannot be assessed to meet any deficit.[1] Thus the legal liability of stockholders in a corporation is quite different from that of the members of a partnership. The latter are liable without limitation for all obligations of the business that are contracted by any of the partners or that accrue to the business from its operation.

In this country the corporation now invariably embodies the principle of limited liability. This privilege has been of fundamental importance for the growth of large-scale enterprise, since no intelligent person is likely to buy stock in a large corporation if he is held individually liable for all debts incurred by the business. Persons are willing to assume unlimited liability only where the owners are few in number, where they are well known to one another, and where the amounts involved are relatively small. It is only under such conditions that we see today the survival of those business types —such as the individual proprietorship and the partnership—upon the owners of which the law places unlimited liability.

The growth of large-scale business in England was undoubtedly retarded greatly during the early years of the Industrial Revolution by the unwillingness of the British Parliament to grant the privilege of limited liability to joint-stock companies. Prior to 1856 this privilege was withheld from all save corporations chartered by special act of Parliament. In that year, however, the privilege was extended to all joint-stock enterprises with the exception of banking and insurance companies. Thereafter the growth in the size of business undertakings proceeded with much greater rapidity. In the United States, on the other hand, the principle of limited liability was accepted from the very beginning. According to one authority, "limited liability was recognized as an attribute of an incorporated company almost

[1] Under the laws of some states, stockholders may be assessed for the amount of unpaid wages due to workers prior to the time that a corporation enters bankruptcy. Until recently it has been customary for stockholders in commercial banks to have "double liability." Thus the federal banking laws provided that, in the event a national bank became bankrupt, each of its stockholders might be assessed an amount equal to the par value of his stock to meet the claims of the bank's creditors. The several states had similar measures affecting the banks chartered by them. "Double liability" to stockholders of national banks was removed by the Banking Act of 1933, and the various states have tended to move in the same direction. State laws relating to capital-stock insurance companies and trust companies provide "double," or even "triple," liability of stockholders. Even in these cases, however, the responsibility of owners of corporate business are clearly defined and *limited* by law.

invariably without specific mention; indeed, it was the principal object desired through incorporation." While the principle of limited liability has proved indispensable for the growth of large-scale enterprise, it is also one of the leading incentives to incorporation on the part of small business and noncommercial enterprises.

Transferability and diversification. Closely associated with limited liability are the advantages of transferability and diversification which apply to corporate securities. By the former is meant the ease with which ownership in corporate securities may be transferred from one person to another. As a result of the development of organized stock exchanges, an individual may reassign his investment in a corporation almost at a moment's notice. It should be clear that the ease with which one can withdraw from a business has an important bearing on one's willingness to enter it. As contrasted with the holder of an interest in a partnership, which usually can be withdrawn only by dissolution of the firm, the investor in readily marketable corporate securities can, whenever he wishes, convert his investment into cash.

In addition, dividing ownership into a great number of small shares makes possible to owners of securities a diffusion of business risks through diversification. Instead of "carrying all his eggs in one basket" by investing all of his funds in a single enterprise, the investor can now insure himself against disaster by placing relatively small sums in a number of separate business undertakings. Since the failure of any single venture will not wipe out his entire fortune, the holder of diversified investments is in a much better position to assume greater risks on the chance of greater returns.

Perpetuity. The corporation, being a separate entity in the eyes of the law, has an existence distinct from that of any of the persons who are members of it. Except in those cases in which the charter is granted for a limited number of years, the life of a corporation can be terminated only by voluntary dissolution on the part of the shareholders or else by a loss of the charter through failure to comply with the terms under which it was granted. In the sense, therefore, that the corporation is immune from the ills of the flesh and is not dependent for its existence upon any natural person, it may be said to be endowed with legal immortality. Unlike a partnership, which is terminated by the death or withdrawal of a partner, a corporation continues in existence regardless of what may happen to any of its officers, directors, or stockholders. This quality tends to give a much greater sense of confidence to the investor in corporate securities, and is therefore an important advantage in the raising of capital.

Concentration of management. The use of the corporate form has tended to place the control of huge business enterprises more and more in the hands of a small number of people. Thus, it has become possible for an individual by ownership of a relatively small amount of capital to control property representing investments vastly greater in amount. In the first place, absolute control over a single corporation can be exercised by the owner of a bare majority of the *voting stock*, which often forms a very small proportion of the total *capital* invested. In fact, it is often possible to control a corporation by means of a relatively small minority stock ownership. This occurs whenever most of the shares are widely scattered in small blocks amongst many investors—most of whom take no interest in the affairs of the corporation beyond the receipt of dividends. Generally speaking, the larger the corporation, the greater the probability that control may be exercised by some person or some group owning less than a majority of the voting stock.

In the second place, the concentration of management has been vastly developed in recent years by means of the holding company device. A holding company is a corporation chartered for the purpose of owning stock in other corporations. By this device the parent company can control another corporation by holding a bare majority (or even a large minority) of its shares. The second corporation in turn may hold the stock of a third corporation, and so on indefinitely. This pyramiding of stock ownership often permits the people owning a majority interest in the parent concern to control capital investment many times greater than the investment they themselves have made. In some holding companies the majority interest has represented less than 5 per cent of the total capital over which it exercised complete control. In view of these facts it is easy to understand the vital significance of the corporate form in the modern movement toward industrial consolidation.

Evasion of responsibility. This topic will be discussed later as one of the chief disadvantages of the corporate form from the viewpoint of the community's welfare. To the individual businessman, however, advantages of this kind may provide a strong incentive for incorporation. By shielding themselves behind the name of a corporation and taking advantage of the anonymity which it allows, individuals are often able to escape responsibility for actions for which they could be held legally responsible in their capacities as natural persons. In addition, the corporate shield can become a convenient device for concealment of an individual's wealth, or his income, from taxes and other liabilities.

PUBLIC DISADVANTAGES OF THE CORPORATE FORM

We have seen, above, the extensive benefits and powers obtained by individuals from the use of the corporate form. We must now look at the obverse side of the shield and consider the disadvantages to the community that arise directly or indirectly as a result of the advantages that accrue to the members of corporations. If the corporation is to be called the mother of large-scale enterprise, it must also be called the mother of manifold abuses from the viewpoint of the public. Of these, the following are perhaps the most important.

Fraudulent promotion schemes. Because of its very efficiency as a capital-raising device, the corporation has provided an unusually fertile field for the perpetration of fraud. Investors are induced to exchange their savings for corporate securities by the lure of profits, and the desire to "get rich quick" is one of the strongest of human motives. For this reason the gullible—and who among us is not gullible in some circumstances?—are often more easily influenced by the extravagant promises of the fraudulent promoter than by the conservative prospectus of a sound enterprise. This abuse has existed ever since the first joint-stock device, and in fact is today a less serious evil than it has been in the past. Thus Macaulay, in his *History of England*, describes fraudulent stock promotion in seventeenth-century England which, in its range and audacity, surpasses even the wildest schemes of contemporary sharpers.

Yet the methods of the modern stockjobber are almost identical with those of the seventeenth century. The chief difference lies in the character of the stocks he offers to the public. Instead of selling shares in a lute-string or a sword-blade company, the fraudulent promoter of today is much more likely to peddle the stock of a nonexistent gold mine or oil well. As long as human avarice exists, such practices are likely to continue and to meet with a certain measure of success. As compared with his ancestors of the seventeenth century, however, the modern investor has certain important advantages in the safe investment of his savings. In the first place, there has grown up during the past fifty years a number of conservative investment-banking houses which have very largely supplanted the wildcat promoter in the marketing of securities. The modern investment banker handles the distribution of securities purely as a merchandising business. His success, therefore, depends largely upon his ability to hold the confidence of the investing public. No amount of competent investment counsel can entirely protect investors against loss due to decline in value of the securities they

buy. But existing facilities are such that there is little excuse for any investor running the risk of deliberate fraud, provided he is content with a moderate rate of return.

It is chiefly in the field of highly speculative investments, such as mining and oil stocks, that the stockjobber still flourishes. Because of the great risk involved, conservative investment bankers are rarely willing to handle such securities until the success of the enterprise is thoroughly established. This leaves the field open to the wildcat promoter for perfectly legitimate speculative undertakings as well as for those which are fraudulent. The spectacular success achieved by the few in such undertakings always provides a strong lure for the small investor who rarely calculates how heavily the cards are stacked against him. Most of the state governments in the United States have attempted to remedy this evil by the passage of so-called blue-sky laws, which regulate the issuance of corporate securities. These laws have met with little success, however, because of the extreme difficulty of drawing a line between what is a legitimate speculative enterprise and what is a case of pure fraud. Greater hope seems to lie in continued efforts to educate the investing public in the principles of sound finance. The methods introduced by recent federal legislation and administered by the Securities and Exchange Commission (to be described in a later chapter) are aids to the information and education of investors.

Stock watering. A related evil that is difficult to eradicate is that of overcapitalization, otherwise known as stock watering. Often, but by no means always, such a practice is purely fraudulent. For example, a perfectly sound business enterprise may reorganize and sell its securities to the public at a higher figure than the prospective earning power of the concern justifies. This occurs most frequently at the time of a strongly rising stock market. The practice is particularly difficult to do anything about because the value of a stock depends so largely upon earning prospects, and the materialization or nonmaterialization of these prospects can only be determined with the passage of time. Here again perhaps the only solution lies in education, and in the hope that investment bankers who deal in watered stocks will lose the confidence of the public and thus eliminate themselves from the business. Again, the work of the Securities and Exchange Commission appears to facilitate the education of investors.

Evasion of responsibility. In the preceding discussion, evasion of responsibility was listed as one of the most important advantages of the corporate form. It must be clear that this advantage to the individual incorporators is a disadvantage from the viewpoint of other people or of the community. The corporation, though a legal person, has itself no standard of

morals. For this reason, corporation officials are likely to feel less moral responsibility for actions performed on behalf of a corporation than they would in their capacity as private individuals. Also, the corporate form provides a splendid shield behind which individuals may escape the consequences of practices for which they would be held legally responsible if they acted directly for themselves, instead of as officials of a corporation.

This evil is particularly glaring today in the case of some small-sized business corporations and noncommercial corporations created by one or two individuals. Large industrial corporations frequently make use of the corporate shield to evade responsibility, but in such cases it is usually a secondary use of a device the primary purpose of which is the raising of capital. In the case of small concerns, however, the corporate form appears sometimes to have been adopted for no other important reason than the desire to evade responsibility. Such corporations are not formed as a device for raising capital. Their stocks are not likely to appeal to the investing public. Furthermore, the limited liability applying to their stockholders will frequently injure the credit standing of small corporations with commercial banks, as compared with individual proprietorships and partnerships. Consequently, the possibilities of evading responsibility are likely to have loomed large as incentives to incorporation. These possibilities include the concealment of assets, evasion of taxes, deception of creditors, and innumerable shady practices. Although it is exceedingly difficult to fix legal responsibility for such actions, the courts in recent years have sometimes adopted the course of "piercing the masquerade of the corporate entity." Where deliberate intent to use the corporate form as a shield for illegitimate practices can be shown, the court may reach behind the shield and place full responsibility upon the individual or individuals concerned.

In addition to the activities of small business corporations must be listed those of the many noncommercial corporations formed in recent years by wealthy individuals to hold their private fortunes. By the use of the corporate form they are often able successfully to conceal their assets, and to escape much of the burden of income and inheritance taxes. When a man incorporates himself, he converts his living expenses into a cost of doing business, and so cuts his taxable income. As the tax laws have been tightened, this practice has become less and less easy to adopt.

An instrument for promoting monopoly. We have seen above that the corporation has been a remarkably efficient means of concentrating the control of vast amounts of capital in the hands of a small number of active business leaders. As a result, the corporate form has played a leading role in the

development of the great business monopolies of recent times. This topic will be discussed further in Chapter 12.

Separation of ownership and management. Until about fifty years ago the characteristic types of business enterprise were the individual proprietorship and the partnership. Under such conditions the owners of a business were also its managers, and no separation of functions existed. Further, the dealings of the proprietor-managers with employees and customers were likely to be on an intimate, personal basis where moral responsibility to fellow human beings could never entirely be eliminated.

Today this situation survives in small individual proprietorships, partnerships, and close corporations, but it has ceased to be characteristic of modern business enterprise. Instead, in the great industrial corporations which are becoming increasingly typical and which set the general tone of business standards, management has become widely separated from ownership. In place of two or three owners who are also the managers of the business, ownership is likely to be divided amongst many thousands of stockholders scattered widely over the face of the globe. The chief concern of these stockholders is the receipt of dividends, and their sole contact with management is through their power to elect the board of directors. As long as earnings and dividends continue ample, the typical small stockholder is not likely to be concerned at all with management policies, or even to bother about casting his vote for the election of directors. At an earlier point in this chapter it was indicated that this tendency for management to become concentrated in the hands of a relatively small controlling group increases with the size of the corporation. If this is borne in mind, the following case may serve as a fair illustration:

> The inability of stockholders to exercise major control over corporate policies can be suggested by an examination of the stock ownership of the country's largest nonfinancial corporation, the American Telephone & Telegraph Co. At the end of 1935 there were 659,000 stockholders on the books of the corporation, a number almost equal to the number of potential voters living in the five smallest states.
>
> The forty-three largest stockholders, each owning 10,000 shares or more, together owned only 5.2 per cent of the total stock, while the seven hundred holding 1,000 or more shares together held only 16.6 per cent. In this largest of all corporations, stock ownership is so widely dispersed that no one person or small group is in a position to dominate the corporation as a result of stock ownership. Neither are stockholders as a group in a position to exercise significant control over corporate policy through majority vote. The policies of the corporation have seldom been presented to the stockholders for a vote before adoption, and

even in the usual vote for corporate directors the proxy machinery usually eliminates any significant control by stockholders. As a result, control over the policies of the American Telephone & Telegraph Co. lies only to a minor extent with its stockholders.[1]

The board of directors supervises the general policies of the enterprise and appoints the leading officials, who conduct the active management. The managers in turn deal with the employees, who may number many thousands, and with the customers, who may number millions. Obviously, therefore, the old personal relationship with employees and customers disappears almost entirely, and the sole contact becomes that of the market nexus. The foremen who deal directly with the employees, and the salesmen who deal with the consuming public are likely never to have seen the president of the concern, and usually have no idea as to the identity of the owners.

This state of affairs often leads to serious abuses. On the one hand, the pecuniary interests of the directors may not coincide with those of the main body of stockholders. Thus, it has frequently happened that a group of directors was able to reap large fortunes by means which were ruinous to the enterprise. This may be accomplished by creating other corporations, of which they are the sole owners, and to which they let out contracts at ruinously high prices. Their losses as shareholders of the major enterprise are often insignificant compared with their gains as sole owners of the minor concern. A notorious example of such tactics occurred during the building of the Union Pacific Railway. An inside group of directors created another corporation, known as the Crédit Mobilier, to which they awarded contracts for constructing the line, at prices which were certain to ruin the Union Pacific while yielding enormous profits to themselves. More recent history furnishes another notorious example of such tactics in the Continental Trading Company which figured so prominently in the oil scandals of the Harding administration. More frequently, this abuse takes a much less blatant form and may consist merely in the voting by the board of directors of outrageously high salaries to themselves or their friends as officials of the concern. The sufferers are the main body of shareholders, who bought their stock in good faith.

On the other hand, where the interests of directors and stockholders are identical, the very identity of their interests may render certain socially approved moral sanctions—just the kind of sanctions that private individuals may feel constrained to observe—ineffectual. As stated previously, stock-

[1] Quoted from *The Structure of the American Economy*, Part I, National Resources Committee, Washington, 1939, p. 156.

holders are not likely to concern themselves greatly with the methods by which the profits are obtained. Such an attitude often forces directors and managers to adopt tactics of doubtful morality in order to hold their positions. For instance, the president of an enterprise may have a high sense of justice in his attitude toward those with whom he deals; but his success as an executive in the eyes of the directors and stockholders depends solely upon his ability to pay dividends. As a consequence, he is forced to treat his employees, customers, and suppliers of necessary materials and services merely as instruments to this end—to buy always in the cheapest market and to sell in the dearest, regardless of consequences other than immediate profits. In this respect the modern corporation appears to furnish the nearest approach to that rational, but bloodless and amoral, discovery of the classical economists—the "economic man."

CHAPTER ELEVEN

The trend toward big business

The corporate form of organization, while possessing the private and acquisitive advantages discussed in the preceding chapter, has come also to present some complicated problems of public policy. Incorporation has facilitated the growth of very large business and industrial units. Mere bigness in itself does not constitute an evil. But the tremendous power associated with bigness sometimes facilitates kinds of action which deviate sharply from the assumptions of economic liberty on which our economic organization rests. Such deviations commonly are called "abuses," although they may be perfectly reasonable results of the way our economic system is organized. At any rate they appear, as trends and tendencies, more "realistic" than the assumptions from which they deviate. Our present concern, however, is with the nature of the deviations themselves, and not with the question whether they are, on the one hand, "abuses" or, on the other, logical fulfillments of conditions implicit in the system itself. Chapters 12 and 13 in this section are devoted to specific ways in which "big business" gives rise to problems of public policy.

"BIG BUSINESS" AND THE "LITTLE MAN"

The American tradition of individualism lays great emphasis upon the "little man." The rationale of our economy runs in terms of the right of every person—even the person of small means—to engage in business or industry on his own account. Economic liberty means that people are able to make choices and to act according to the choices which they make. Ideally it means that there is a wide range of choices available to the individual. Included in this ideal range of choice is the alternative that a person who does not want to work for someone else [illegible]

in a business of his own. It is assumed, of course, that such a person will have prudence and foresight, and will have accumulated the capital necessary for the establishment of his business. But these are just the qualities which, according to the tradition, are needed by the successful businessman; and so his emergence from small beginnings and his success against competitive odds are the best assurance the community can have that business and industry are in competent hands.

To the individual in a liberal economic system the range of his effective choice determines the degree of his economic liberty. For his range of choice to include the opportunity to go into business for himself, there must be small business concerns. There also must be openings for new small businesses. Throughout our industrial history, however, there has been a marked tendency for business and industrial concerns to become large. But the tendency toward bigness necessarily means a progressively more restricted sphere for the "little man."

There remain, of course, a large number of small business enterprises.[1] The greatest concentration of these is in the field of agriculture, where there are more than six million farm units. In 1935 there were fewer than forty-two thousand farms on which more than five persons were gainfully employed. The more than six million farms on which fewer than five people work constitute well over one-half of the total number of producing units of all types in the country. Again, in the field of retail trade a great many small enterprises exist. In spite of the operations of large chain-store systems, department stores, and mail-order houses, some 30 per cent of all retail sales in 1939 were made by independent stores having annual volumes of sales of less than $30,000. Many branches of the service industries (not including public utilities and motion-picture producers, among which large concerns predominate) are marked by numerous small enterprises. Yet, in spite of the large number of small concerns in these and other fields, a study by the National Resources Committee presents the estimate that "altogether,

[1] Cf. *Meeting the Special Problems of Small Business*, Research and Policy Committee, Committee for Economic Development, 1947. This report estimates that more than 650,000 small business concerns were started in the prosperous year, 1946, the largest number in any year of our history. It continues: "But the boom times of 1946 and early 1947 will not last forever. As the war-accumulated backlogs of demand are satisfied, as the supply of available goods increases, and as competition for markets becomes increasingly keen, the curve of discontinuances and failures will begin to mount. When business activity slackens, losses tend to increase more sharply for little business than for big business. In hard times the rate of failures is greater for small business than for large. A decline in business activity would send many of the new small businesses to the wall."

little more than a third of the nation's economic activity is carried on by producing units engaging the activity of one to five persons. An almost equal proportion is carried on by a few hundred very large administrative units." [1] It is this condition which is important to the present status and future prospects of the "little man."

THE TREND TOWARD BIGNESS

The concentration of business and industry which has been described is best to be regarded as a *trend*, rather than as a *condition*. It has been going on for a long time, but at a fairly steadily accelerated rate. In the late eighteenth century, Alexander Hamilton's famous *Report on Manufactures* described the United States as "a vast scene of household industry." The few large commercial enterprises that existed accounted for only a tiny fraction of the economic activity of the time. As recently as 1904, John Moody in *The Truth about Trusts* found only about thirty manufacturing corporations that were capitalized at more than $50,000,000. Due to inflated capital values and inadequate accounting methods of that time, the figure given probably exaggerates the facts. As to the more recent situation, the National Resources Committee listed, in 1939, seventy-six *industrial* corporations with *assets* of more than $100,000,000. The same list shows that the smallest of the two hundred largest corporations in *all* fields had assets of more than $67,000,000. In the period since 1939, the trend appears to have continued.

The trend is impressive, even though the condition which it represents has become a commonplace in our economic life. There are few major fields of industry which do not contain at least one "hundred-million-dollar" concern. Several industries can boast of one or more "billion-dollar" companies. This is taken so much as a matter of course that a merger creating a new billion-dollar concern nowadays evokes little public comment or discussion. Almost every person comes into daily contact with one or more of these giant companies. Even if he does not work for one of them, he is likely to use telephone service, an automobile, gasoline, railroad services, or electricity produced by a billion-dollar corporation. He may also insure his life or keep a bank account with other billion-dollar concerns. In fact it would be extremely difficult for him to do any of these things or to carry on most of his other ordinary activities without dealing, directly or indirectly, with a huge corporation.

[1] *The Structure of the American Economy*, Part I, National Resources Committee, Washington, 1939, p. 104.

PROBLEMS CONFRONTING SMALL BUSINESS AND THE PUBLIC

The alternatives remaining to the "little man" are somewhat limited. He may work for one of these large companies. His savings, too, he may invest in the stocks or bonds of one or more of them. But suppose he does not wish to work for an employer, what alternatives—other than complete idleness—are open to him? If he possesses, or can acquire, the expensive qualifications necessary, he may follow a profession. Preferring business, he may establish a small business of his own, or may supplement his own capital with that of other people by forming a partnership or small corporation. If he has extraordinary insight or luck, he may develop a new product and gain a foothold as a small manufacturer. More probably, if he has the necessary tastes and elementary knowledge, he will buy a farm or open a retail store. Neither will be a gold mine; indeed hard work and perspicacity may be needed to stave off disaster.

The importance of small business concerns to our economy and our society has been strikingly summarized by A. D. H. Kaplan:

> The last few generations have witnessed a progressive centralization of economic control. The development of big business has had its counterpart in the development of "big government." In the wake of big business, also has emerged "big labor," with nation-wide scope for giving effect to collective bargaining. Farming, until recently regarded as the epitome of independent individual enterprise and the free market, has now been brought under a system of production controls, subsidies, price supports, and integrated marketing, all of which add agriculture to the other nationally managed areas of our society. Thus, small business is left as the only relatively "unadministered" sector of the economy.
>
> Of all economic elements, small business enterprises are the least amenable to centralized control, hence a nuisance in a government-managed economy. This fact has been significant to Americans who are aware that elimination of independent small business has been a feature of the economic pattern in every country where totalitarian governments have succeeded. It is hard to envisage a vigorous middle class or a strong nucleus of independent voters, without the freedom of self-employment that is implicit in the opportunity to start a small business. Small business contributes to social and political moderation; the very number of small enterprises tends to prevent concentration of power in any one group.
>
> The widespread fear that small business is being crowded out in an unequal struggle for survival is not due only to the closing or suspension of a million small businesses during the war. The ascendancy of bigness long antedates the war. There has been a popular identification of size with proficiency and stability, with an attendant gravitation of savings toward investment in com-

panies listed on the Stock Exchange, rather than in small companies. The prestige that attaches to a large firm has come to have an appeal for the young man seeking a career, though the relatively few big jobs in large organizations indicates that most persons going into them can achieve positions of only moderate or minor importance. Big business catches the public eye with the advertisement of its achievements.

Technological resources and the miracles of modern research are associated with big business in the public mind. Business schools and engineering schools have been concerned largely with developing those professional skills for which big companies offer the obvious market. In spite of the traditional emphasis on independent enterprise, little has been done to dignify small business ownership as worthy of professional and educational attention.

Those who are concerned with the future of small business are anxious to see this psychology reversed. They would like to see the best talent of the next generation go into self-employment and business ownership, believing thus to give full play to the capacities of people with courage, versatility, and imagination. Partly for this reason, attention is being given to ways of making establishment of small businesses more attractive, to liberalize credit and to make taxation on small business less burdensome, and to encourage public and private services for the guidance of small enterprises.

The future of small business is of concern not only to small businessmen. Big business knows that its chances to continue under the present system rest heavily upon the presence of many virile, healthy small businesses, bent on retaining the opportunities and liberties that go with private enterprise. For the wage earner, in turn, the alternative of self-employment in small business is an important morale factor. To many an employee it means a sense of independence that might otherwise be lost. Small business, moreover, is a customer and distributor of the products that make possible the paychecks in big industrial units.

Small business, then, has social as well as economic values. To preserve them, however, may entail some debatable public costs. What price is worth paying to preserve small business? In the answers to that question lie niceties of distinction between measures that help small business to play a more virile role in our economic life, and those that would merely postpone a reckoning with the causes of small business failure.[1]

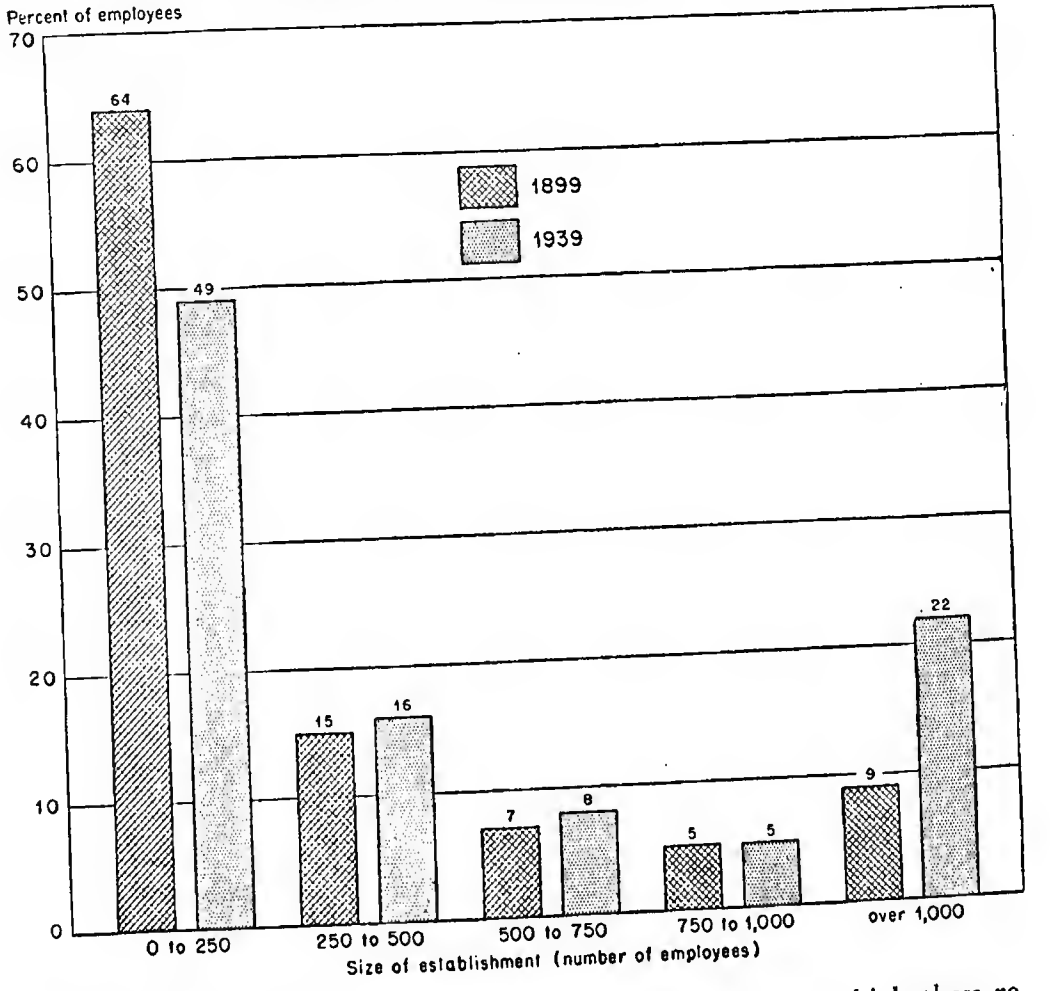
CONCENTRATION OF EMPLOYEES AS A MEASURE OF BIGNESS

Just how did "big business" become big? Partly because individual plants or establishments, individual mines and factories, stores and warehouses grew in size; partly because firms (more and more often incorpo-

[1] Quoted by permission from A. D. H. Kaplan, "Why the Concern for Small Business?" *CED Digest,* Committee for Economic Development, July 1947.

rated) came to own and operate a larger number of establishments than formerly. Both tendencies led to the same result: a higher degree of concentration in the ownership and control of business. The facts and figures which bear upon this question come from a wide variety of sources and

Figure 20 **GROWTH IN SIZE OF FACTORIES: PERCENTAGE DISTRIBUTION OF MANUFACTURING EMPLOYEES BY SIZE OF ESTABLISHMENT, 1899 AND 1939**



are not always easy to interpret. Nevertheless the process which they reveal is in its main features a consistent one. There are many evidences of the growth in the size of the business unit, and of the overwhelming importance—in certain fields—of very large enterprises.

Let us look first at the number of workers per establishment in manufacturing industry. The average number of workers per factory grew from 24 in 1899 (the earliest year for which figures were collected) to 43 in 1939. Measured by number of employees, therefore, the average manufac-

turing plant nearly doubled in size during this forty-year period.[1] More significant, perhaps, is the statement that in 1899 two-thirds of all factory workers were to be found in plants employing fewer than 250 workers; in 1939 only half of all workers could be found in plants this small (see Fig. 20). Again, in 1899 fewer than a tenth of all factory employees worked in plants employing more than a thousand workers each; in 1939 between a fifth and a quarter of the employees were to be found in factories this big.

The above historical comparison is necessarily confined to manufacturing, but for recent years we can make much more general statements. Since the Social Security Act was passed in 1935 the Social Security Board has tabulated the number of workers employed by each employer. Certain types of activity are not covered by the act, the most important being agriculture and railroad transportation; however, the data do cover mining, utilities, trade and the service industries, in addition to manufacturing. According to this tabulation, in the year 1939 more than half of all firms employed fewer than four workers apiece. This group of firms—relatively numerous but quite small, with from one to three workers on their payrolls—collectively employed less than 7 per cent of all workers. By contrast, at the other extreme were fewer than two hundred large concerns, each employing ten thousand or more workers. This group of firms, constituting approximately one ten-thousandth of the total number of reporting employers, had on its payrolls one-eighth of all the workers.[2]

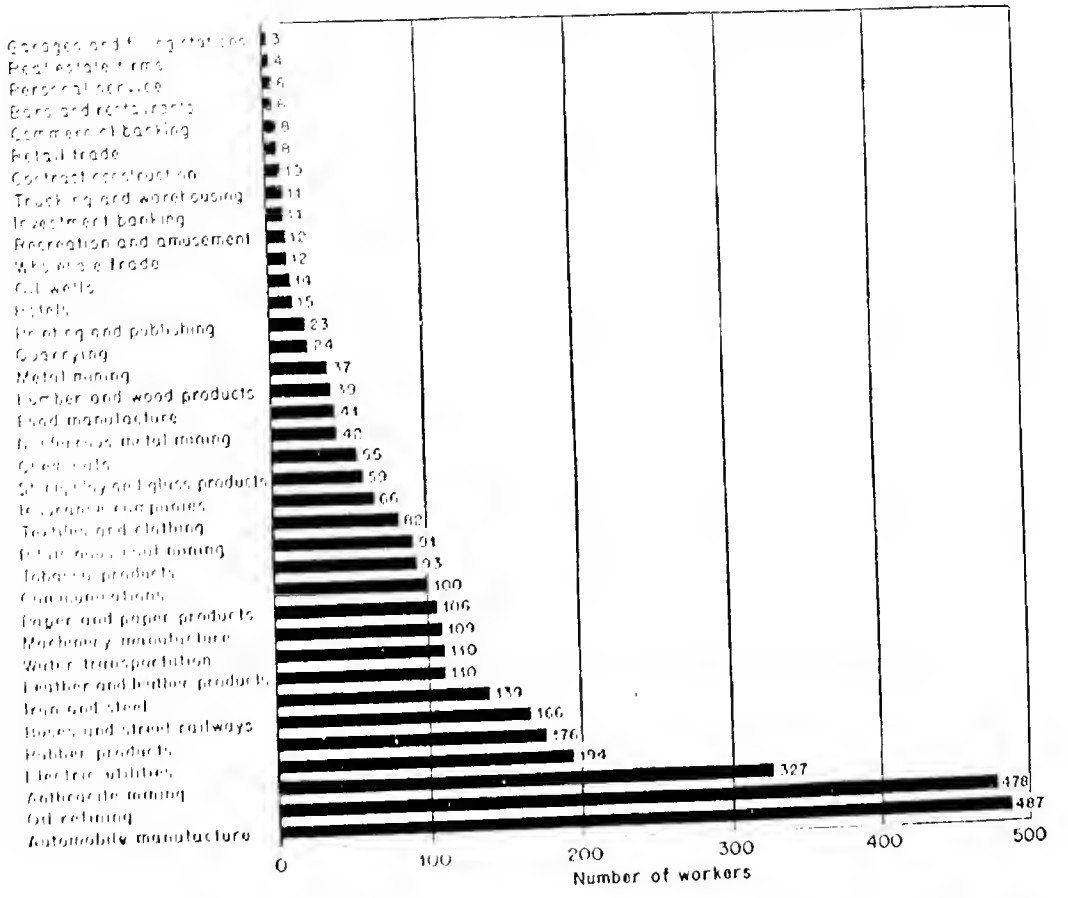
In what types of business has concentration proceeded furthest, and in what types is the typical enterprise still relatively small-scale? The Social Security data shed light on this question also. The average number of workers per employer in 1939 is shown for most of the more important industries, both manufacturing and nonmanufacturing, in Fig. 21 (agriculture and railroad transportation are again excluded). Among types of business averaging fewer than ten workers per employer, we find retail trade, personal service (e.g., barbershops and beauty parlors), and construction firms —all fields in which, as we saw in the preceding chapter, unincorporated enterprise is still important. If we had accurate data, agriculture, too, would

[1] We do not know the average number of employees per *firm* or per *employer* in 1899. Since some firms operate more than one establishment, the average number of workers per firm was clearly somewhat greater in both years than the figures in the text would suggest; and it is reasonably certain that average workers per firm also increased between 1899 and 1939.

[2] Preliminary postwar figures issued by the Social Security Board show that in March 1945 there were approximately 200 firms each employing 10,000 or more workers. Collectively these firms employed more than 20 per cent of all workers covered by the Social Security Act.

[illegible] would stand at the top of the chart, for in the [illegible] fewer hired laborers on farms than farm operators, [illegible] may be found automobile manufacturing and [illegible] with close to 500 workers on the payroll of the average

Figure 21 WORKERS PER EMPLOYER, SELECTED INDUSTRIES, 1939



employer. Like agriculture, railroad transportation is not covered by the Social Security data. Just as farmers employ fewer workers on the average than any other group, so railroads have longer payrolls than any group shown in Fig. 21. According to the Interstate Commerce Commission the United States had 781 separate railroad companies in 1939, the average number of workers per railroad being about 1,900.

CONCENTRATION OF CAPITAL AS A MEASURE OF BIGNESS

Evidently firms have grown larger by employing more workpeople Yet growth in the average number of workers per establishment or per em

ployer gives at best an inadequate measure of the trend toward big business. Many firms have grown larger by increasing their use of capital—by using more highly mechanized processes—without any, or at least without any corresponding, increase in the number of their employees. Changes in the amount of capital employed are difficult to measure, but a recent comparison indicates that the book value of buildings and machinery used in the average manufacturing establishment in 1939 was roughly five times that of buildings and machinery used in 1904.[1] The prevailing price level, at which firms valued their buildings and machinery in 1939, was probably about twice as high as that of 1904. Making allowance for this inflation in values, we may say that the real amount of fixed capital of the typical factory in 1939 was between two and three times that of the typical factory in 1904. Or, in vaguer but more general terms, the typical American factory immediately prior to World War II employed nearly twice as many workpeople and more than twice as much capital as it did at the beginning of this century. The measurement of further changes which may have occurred during and since World War II awaits the taking of the first postwar census.

We saw above that the number of workers on the payroll of the average employer varies greatly according to the type of industry considered. Variations in the amount of capital invested in the typical enterprise are at least as great. The United States Bureau of Internal Revenue collects data on this topic, although it does so only for corporations. We may note, for instance, that you could set up in business as an average-size corporation in 1942 in the trade or service fields for less than $100,000; on the other hand, the average corporation engaged in mining or manufacturing had an investment of over half a million dollars, while even a small electric utility would cost several million dollars.

The tendency of business concerns to grow large clearly is not confined to any single division of industry or trade; it has occurred—to a greater or less extent—in manufacturing, in transportation, in banking, in merchandising, and in public utilities. The remainder of this chapter will offer some explanations of the tendency as it applies to manufacturing industry. In this connection, chief attention is given here to the "internal" reasons for large-scale operations. These are sometimes called the "economies of scale," or cost advantages which result from bigness. The monopoly advantages enjoyed by some large concerns will be described in later chapters.

[1] Solomon Fabricant, *Employment in Manufacturing, 1899-1939*, National Bureau of Economic Research, New York, 1942, pp. 253-57. 1904 is the first year for which figures were collected. The number of establishments in 1939 was slightly less than in 1904.

HOW THE MARKET AFFECTS THE SIZE OF FIRMS

The size of an entire industry, measured by its output, is regulated by the demand for its product. The size of the marketing area and the willingness and ability of the people to buy are the determinants. In most instances this does not mean, of course, that mere territorial limits or "natural" demands give the industry its size. Producers may cultivate their markets as intensively as the prospective profits warrant—e.g., show how an automatic sprinkler system pays returns by reducing insurance rates, or make the public "soap conscious." Yet, in the end, the size of an industry is regulated by the demand for its product. This circumstance also has an influence on the size of single plants within an industry, but it is not a completely determining one—unless the establishment chances to be a monopoly. A manufacturer of automatic sprinklers, for example, may buy out some of his competitors and thus create a larger single enterprise than formerly existed. Or a producer of soap may be able to convince the soap-using public that his soap is preferable to any other because of its (real or supposed) germicidal quality or because it floats, and thus expand his business regardless of the demand for soap in general. In these ways, as well as others, an individual establishment may increase in size even though the industry of which it forms a part is standing still or growing smaller.

Intensive and extensive cultivation of their markets not only causes industrial enterprises to grow large; in order to be able to cultivate markets in this way it is necessary that such enterprises already *be* large. It is obvious, for example, that small concerns could not afford to conduct an advertising program by nation-wide radio broadcasting or by buying space in the popular magazines. Nor, even if they could afford it, would it pay them to do so. It appears, therefore, that firms which cannot employ these mass-scale methods of sales promotion often are placed at a disadvantage in relation to their larger competitors. Many of the consolidations and mergers of small firms into large ones which have occurred in recent years probably were motivated, in large part, by this consideration.

HOW DIVISION OF LABOR AFFECTS SIZE

A second set of reasons which account for the existing high degree of concentration in manufacturing industries is physical and technological. For the primary one of these reasons Adam Smith has supplied the formula: "The greatest improvement in the productive powers of labor, and the

greater part of the skill, dexterity and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labor." Then, in a famous passage, Smith describes the way in which the manufacture of pins, when the eighteen separate operations involved in pin-making are divided among skilled operators working together, gives rise to an output per man many times as large as would be possible if each man worked separately and independently. The greater the division of labor, the larger the productive capacity of the enterprise. As machines come to perform a larger and larger proportion of the "labor," the division of labor grows constantly more minute and more elaborate, thus increasing still further the productive capacity of the plant.

In the physical process of production there always is a limit—determined by the prevailing state of the industrial arts—beyond which division of labor cannot be carried. Thus in Adam Smith's time the making of pins could not advantageously be divided into more than eighteen separate operations. Yet it may be possible to secure still greater division of managerial labor or marketing labor, or more effective utilization of plant or power, by having a number of productive units, each with optimum efficiency as regards division of labor, owned and operated by a single firm. Adam Smith's pin factory, for instance, might have effected a further division of labor by having several pin-making units, each one containing all of the specialists necessary to the performance of the eighteen operations.

HOW LARGE MECHANICAL UNITS AFFECT SIZE

Another technological tendency making for increased size of manufacturing plants comes from the use of mechanically generated power. A power plant (e.g., a steam engine) may easily be of such small size as to be inefficient for driving machines and inordinately expensive to maintain and operate. Imagine, for example, a power plant capable of driving only a single wood lathe. It would cost more to install, in proportion to its power capacity, than a plant which would drive twenty such lathes. It also would have a larger proportional friction to overcome and would consume more fuel per unit of power delivered. There would be little difference in the time and trouble of firing, oiling, cleaning, and repairing the small plant or the larger one. The most efficient one-man power unit is the largest that can be tended with a reasonable application of one man's efforts. Beyond this point division of labor becomes possible. One man is an engineer, another is a fireman, others, perhaps, are oilers, wipers, etc. Up to the point at which a further division of labor is not possible—where further enlarge-

ment merely multiplies the number of functionaries without increasing the number of functions—such a development makes for increased efficiency of the power plant *per se*. Beyond this point still greater efficiency often is possible by the use of various labor-saving contrivances which are applicable only to very large power plants, as, for example, mechanical stokers.

The specific conditions outlined above are obviated, of course, where the power used by the plant is furnished by motors which are propelled by purchased electric current. But even here greater efficiency and economy can be secured from a large motor than from a small one. A one thousand horsepower motor is not ten times as costly to build or to buy as one of a hundred horsepower. Neither is its expense of installation, wiring, repairing, or upkeep ten times as great. Nor does it have ten times as much dead weight or friction to overcome. The greater economy of using larger quantities of electric current is made evident by the preferential rates given to large users by power companies. Of course, there always are limits beyond which further enlargement of a power plant would result in less rather than greater efficiency and economy. One such limit is set by the immediate and prospective market for the products of the factory. Another is set by the prevailing technology. There is evidence, however, that the size of power plants in actual use by manufacturing concerns is steadily growing.

These physical conditions of operating efficiency due to large size are important to the manufacturing concerns themselves because they result in lower costs of production. Other advantages of the same kind are due to the ability of large concerns to buy materials, fuel, and other things more cheaply by getting them in large quantities. Standardization also can be more effectively worked out. In the marketing of their products, large concerns can spread their advertising and other costs over a greater volume of sales. There also are various economies of management and of financial administration which are available to large concerns.

INTEGRATION OF PRODUCTION BY LARGE FIRMS

The economies of scale discussed above are general in character and of wide application. Many large firms enjoy a number of more specialized operating advantages.

Mere increase in scale—the manufacture of twice as many pins as formerly—is known as horizontal expansion. Growth in size can also occur when a business pushes backward to produce its own raw materials or forward to control its own distributive channels. This tendency for a single enterprise to control more and more stages in the long road from field or

mine to ultimate consumer is known as vertical expansion, or integration. A manufacturing concern must buy all of the materials, services, and facilities which it needs and does not itself produce. Its dependence on others for things essential to its operation—as, for example, materials or power—represents a certain danger to both the profitableness and the productiveness of the business. For instance, a shutdown for any cause by one or more of the supplying firms may force the concern itself to cease operations; if one of the supplying firms merely takes advantage of an opportunity to charge exorbitant prices, or is temporarily unable to meet the requirements of the concern, the latter may be severely crippled. It is equally true, of course, that a manufacturing concern will benefit from being assured of a stable market for whatever commodities or services it may produce. Such conditions have led, in many fields of manufacturing industry, to a high degree of integration within single plants—as well as to combinations of complementary plants along vertical lines. Thus in woolen factories the sequential processes of sorting and cleaning, carding or combing, spinning, weaving, fulling, dyeing, and finishing, each of which formerly was done by a separate and independent establishment, often are combined today in a single firm, possibly even under a single roof.

VARIED PRODUCTS OF SOME LARGE FIRMS

The utilization of by-products by large plants makes for increased economy both because of the value of the by-products themselves and because their fabrication enables reduction of prices of major products. An oil refinery is an extreme example but illustrates the principle. A small refinery might be able to make a very good grade of gasoline, but probably would waste the residue of materials. The ability of a large refinery economically to manufacture and market kerosene, lubricating oils, paraffine, asphalt, etc., causes an increased output of these articles and also probably a larger production of gasoline—since the costs of the major products are reduced by the gains from the by-products, and selling prices tend to be lower than they otherwise would.

Greater economy is achieved in some large plants by a diversification of products which involve similar techniques, or are made from the same materials, or can be sold to the same customers. Thus a manufacturer of men's shirts may find that his material and selling costs will be reduced, and the mechanical efficiency of his plant enhanced, if he also makes collars and underwear.

TECHNIQUES AND RESEARCH OF LARGE FIRMS

On the side of techniques, large concerns often contain within themselves the germs of still greater size. Only a large industrial unit can afford to engage in the experimentation and research which give rise to cheaper methods of making goods. The larger an establishment is, the better able and more eager it ordinarily is to use improved productive equipment or methods. The United States Steel Corporation, for example, could never have developed or have afforded to adopt many of the refinements which have given it its enormous productive capacity if it had not already been large before it brought them into use.

Just as the introduction of methods expensive to install but economical to operate is possible only to concerns of large size and great financial power, it is by the adoption of such methods that concerns grow even larger and more powerful. For example, data prepared by the United States Tariff Commission show that it cost, in 1939, $2,500,000 to construct an average-sized blast furnace. The same source shows that three continuous mills for hot-rolled steel products, costing more than $20,000,000 each, were completed in 1937. Other examples abound in recent business reports; the synthetic textile industry presents some interesting ones. The Industrial Rayon Corporation has a continuous-process spinning plant which is estimated to have cost $11,000,000. The Celanese Corporation spent $10,000,000 on a plant to manufacture an entirely new synthetic yarn. When it announced its revolutionary textile fiber, nylon—made of raw materials secured from coal, water, air, and other substances—the Du Pont Company made public a projected plant expenditure of $8,000,000. This, of course, is in addition to the many millions of dollars which must have been spent on research in developing this product and the methods for producing it. To begin the manufacture of automobiles at Willow Run, Henry Kaiser needed in excess of $20,000,000, although (like other automobile-makers) he purchases numerous components from other manufacturers.

What makes an enterprise "big" is, primarily, the fact that it represents a large investment of capital. The illustrations that are given above of how economical methods of production call for large capital outlays are extreme cases; steel, synthetic textiles, and the manufacture of automobiles are industries in which every firm must be a large one—even though some may be larger than others. But the conditions described apply also, in greater or less degree, to many industries. Technological developments favor large-scale operation and seem likely to continue to encourage bigness. Firms that

enter particular industries, and operate successfully in them, must possess the capital necessary to secure efficient and economical operation. Anyone who wishes to do so is free, for example, to enter the business of manufacturing steel, synthetic textile fibers, or automobiles. But the indications are: (1) that these are fields in which efficient operation can be achieved only by the large-scale methods that have been described, or by developments of them; and (2) that any firm using these methods is necessarily a "big" business enterprise.

COMBINATION IN INDUSTRY

Just as important as the tendency of single concerns to grow larger, is the tendency toward tying together two or more plants into a single enterprise. The operation by one company of several packing plants is an illustration of this tendency. Another is the consolidation of an explosives factory, a textile mill, a cellulose products plant, and a roofing material factory—all within a single enterprise. The various industrial establishments operated by the United States Steel Corporation, or by the Ford Motor Company, or by any of several large oil companies, or by the General Motors Corporation, will occur at once to anyone who is versed in American industries. Such enterprises are more than large plants; they are groups of plants, all owned and managed in common. What has been said above concerning the size of individual factories applies to each of the separate plants within the enterprise. Yet the unity of operation of all of them makes the entire group subject to a single co-ordinated policy and to special considerations which cannot apply to single establishments.

There are, in general, two sets of trends which are apparent in the process of consolidation. The common designations applied to them are "horizontal combination" and "vertical combination." Horizontal combinations are those which consist of several establishments which are functionally similar, i.e., are engaged in turning out goods or services of the same type. A company which operates several packing plants is an example. By a vertical combination is meant one whose several establishments are functionally dissimilar, but are, all of them, engaged in carrying forward a single purpose or set of purposes. A company engaged primarily in turning out steel products and which facilitates that end by operating coal and iron mines, blast furnaces, rolling mills, a railroad, steamship lines, selling agencies, and other establishments furnishing various related services and facilities, is an example. Some combinations develop along both horizontal

and vertical lines and so cannot be placed exclusively in either category. And some few others have grown and branched out in ways which do not conform to either classification.

ECONOMIES OF HORIZONTAL COMBINATION

The simpler form of industrial combination is the horizontal. By this arrangement various plants which, if separately owned and managed, would be competitors of one another, are owned in common and operated in accordance with a single policy. The desire to restrict competition appears to have been at least as active an influence making for horizontal combination as the possible savings and enhanced operating efficiency which could result. This type of combination has, in fact, been the one chiefly involved in the "trust movement." The role of industrial combination in creating monopolies will be treated in the next chapter.

The first and most obvious economies attendant upon horizontal industrial consolidation are the presumably lower material costs which come from buying in large quantities and the presumably smaller selling costs which are derived from the absence of duplication of selling efforts. Many of these economies probably have been more apparent than real.

The saving of cross freights. By locating plants in places available to different divisions of the market, or at different sources of raw materials, much cross shipment may be avoided. Other things being equal, the saving of transportation capacity is a net social gain as well as an operating economy to the firms concerned. An illustration of this saving is afforded by several of the large packing companies. Although this industry has its largest concentration in Chicago (chiefly because of its location and of the fact that half of the railroad mileage of the United States terminates there), some companies also operate packing plants in Kansas City, Omaha, Fort Worth, Oklahoma City, and other places. Each of these cities possesses transportation facilities which link it with parts of the cattle-raising sections of the West and also give it access to marketing regions.

The specialization of plants. Horizontal combination makes it possible for a concern to make various grades of the same commodity, thus catering to the demands of a wide market, and at the same time so to divide the grades among its different plants as to secure maximum operating efficiency in each. The most economical techniques in many industries will not permit a single plant to turn out a wide variety of products without a considerable sacrifice of operating efficiency. Yet a single concern which is composed of several plants can turn out goods of various grades or specifications

without such a sacrifice. The American Steel Hoop Company, by dividing its eighty-odd sizes and varieties among its several plants so that each specialized in producing a single group or class, effected important economies. The General Motors Corporation is a well-known combination of differentiated and specialized establishments which produce what are in effect five separate and distinct kinds of automobiles, besides aero-engines, refrigerators, Diesel locomotives, and many other articles.

The concentration of fluctuations of production in single plants. Some horizontal combinations are able, under nearly all circumstances, to operate at least some of their plants at the rate which most efficiently utilizes their capacities. Temporary variations of output may be absorbed in certain plants which are maintained for that purpose. John Maurice Clark illustrates and comments on this procedure as follows:

> The United States Sugar Refining Company concentrated its fluctuations in a large refinery in Brooklyn. The Carnegie Steel Company has a huge by-product coke plant at Clairton, near Pittsburgh, which does not supply all the coke the company needs in active times, so that it can be kept running at full capacity, together with a fleet of towboats and barges which bring down coal from the company's mines farther up the Monongahela River. The fluctuations are taken care of by beehive coke ovens [less efficient and obsolescent] located nearer the mines. Deplorable as it may seem that there should be any beehive ovens [still in use], it is certainly more economical, if they must be used at all, to use them in this way. This kind of economy seems to be one of the recognized advantages of horizontal combination.[1]

FLEXIBILITY AND ADAPTABILITY OF HORIZONTAL COMBINATIONS

It is possible for a combination of plants making similar products to adapt itself to meet new or changed demands, and also to anticipate such demands, in ways which are not available to a one-plant concern. Perhaps the most common way of doing this is through the allocation or reallocation of productive facilities. A horizontal combination can reduce its production of goods of a certain type or in a certain place, or can even withdraw from such production, without retiring from business or abandoning its capital investment. On the other hand, such a combination can divert parts of its productive capacity, or can direct new capacity, toward making more of certain types or grades of goods, or toward making new types or grades.

[1] John Maurice Clark, *Economics of Overhead Costs*, University of Chicago Press, 1923, p. 95.

All of this may be expedited and directed by the central management of the combination. It is, of course, evident that such reallocation would not be possible to single-plant firms. A single-plant enterprise must remain a going concern, or suffer failure, according to the operating possibilities of its one plant. It will not voluntarily withdraw because it has no reserve forces upon which to retire, but will, if the market so dictates, die fighting what may be the inevitable. It is true, of course, that capital resources tend to adjust themselves to market trends by withdrawal from unremunerative fields and reinvestment in others more favored by the market. But such a process is extremely slow and wasteful by comparison to the flexibility with which horizontal combinations can adapt themselves to changed conditions.

This advantage of allocation of resources takes various other special forms. One of them is the support which certain of the units within a combination can give to other units which are in temporary difficulty, or which may promise ultimately to stand on their own feet even though they are weak for the time being. The separate units are not single sticks; the whole enterprise is rather a bundle of sticks, each of which gives strength to the others. The support of a constituent plant through its infancy, and until it is able to assume responsibilities of its own, is a common practice of horizontal combinations. Because of the hazards which attend the launching of a business enterprise, many lines of production would not be developed as rapidly as they are, if it were not for the sustaining strength of horizontal combination. In the same way the securing of new or additional capital for a particular plant is facilitated by this form of association. It may be secured from the consolidated earnings of the combination, or by borrowing on the security of all the assets of the combination.

THE RISE OF VERTICAL INTEGRATION

The integration of industrial processes already has been discussed in connection with large single units. Integration as it occurs in vertical combinations possesses the same characteristics as in such single plants. It is, however, wider in its scope and in its consequences.

The specialization of industrial concerns was initiated in the early phases of the Industrial Revolution by the introduction of power-driven machinery. Plants began to engage in only a narrow division of the total productive function and thus to form links in a chain. Prior to the use of power machines—i.e., under the handicraft and household methods of production—a larger proportion of the total process of making goods generally was carried through in a single establishment than was the case after the

advent of the highly mechanized factory. One student of the disintegration of manufacturing—the division of different stages of a single productive process among different enterprises—concludes that it was due to a lack of capital resources. There was not sufficient concentration of capital to permit single concerns to attempt more than one or a few steps in the production of a commodity.

Another reason may have been a lack of sufficiently large markets. A manufacturer of "finished" products then, as now, needed to be able to dispose of enormous quantities of goods before it would pay him to apply the new machine methods to making his materials or his equipment, or fabricating by-products. Whatever the reasons may have been, it remains a fact that the beginnings of machine production were accompanied by a separation and segregation of steps in manufacturing goods. Today the arrangements of industry have changed. The rise of the corporate form and of greatly enlarged credit resources facilitate the assembling of large amounts of capital. Improved means of transportation and communication and the increasing dependence of people on buying most of the things they want—instead of making them for themselves—have created markets of vast dimensions. So the growth of machine industry has set in motion forces which react upon itself and cause still further growth. These are the forces, social, commercial, financial, and technological, which have caused industrial integration and which promise to carry it farther.

EXAMPLES OF THE SCALE OF INTEGRATION

One or two illustrations of what has been accomplished by integration through vertical combination may help to make clear the significance of this movement. The E. I. Du Pont de Nemours Company is one of the largest and most highly integrated industrial corporations in the United States. The company came into existence more than a century ago as a manufacturer of gunpowder and has been, almost since its beginning, the largest maker of explosives in the United States. In addition to a wide variety of explosives, the company has engaged extensively in the manufacture of cellulose products. It also has branched out widely in the production of chemicals and in the making of finished products which embody the materials it produces. Through the purchase of stock in other corporations (some of them highly integrated combinations) it has obtained some degree of control over companies which are its customers or on which it depends for materials or services. The Du Pont Company is the largest single

stockholder in the General Motors Corporation and owns an important block of stock of the United States Steel Corporation. The total result of its operations is a great variety of related and unrelated products. These include all manner of explosives, raw chemical preparations, paints, a lacquer which has caused great changes in the finishing of automobile bodies and other metal products, synthetic textile fibers, dyestuffs, roofing materials, substitutes for leather and for ivory, and a number of other goods which are in common use.

A markedly different illustration of industrial integration is afforded by the Ford Motor Company. This concern, unlike the Du Pont Company, has a single dominating interest—the making of Ford automobiles. It is true, of course, that it turns out other products, such as Fordson tractors and Lincoln motorcars, and that it owns other business concerns ranging from shoe stores to railroads. These interests, however, have risen out of the business of making Ford automobiles and contribute to that end. The Ford organization is so arranged that integration in a vertical direction broadens out horizontally at several points as, for example, by the operation of a number of assembling plants and several body factories. The history of the Ford Motor Company is one of vast expansion both territorially and industrially. Mr. Henry Ford has provided a description:

> We have, step by step, gone back to primary sources. We are in the motor business and in no other business. Everything that we do gets back to the motor. With the Ford Motor Company of Canada, there are now a total of eighty-eight plants, of which sixty are in the United States and twenty-eight in foreign countries. No one plant anywhere makes a complete automobile. Of the plants in the United States, twenty-four are exclusively manufacturing plants and thirty-six are assembling or partly manufacturing and partly assembling.
>
> We are in the following lines of business, every one of which grows out of making motors: aeroplanes, coal mining, coke manufacture, by-products manufacture, lead mining, iron mining, foundry, steel manufacture, tool making, machinery manufacture, car, truck and tractor manufacture, glass manufacture, artificial leather, copper wire, Fordite, textiles, batteries and generators, paper, cement, automobile bodies, Johanssen gauges, electric power, filtered water, flour, motion pictures, hospital, farming and stock raising, radio, printing, photography, forging, flax growing, steam turbine, electric locomotives, logging, sawmills, body parts, dry kilns, wood distillation, products of hydroelectric power, grocery stores, shoe stores, clothing stores, butcher shop, railroads, educational, ocean transportation, lake transportation, tractors, and automobiles.[1]

[1] Henry Ford, in collaboration with Samuel Crowther, *Today and Tomorrow*, Doubleday, 1926, p. 40.

Integration through vertical combination differs only in degree from integration within a single productive unit. Yet the difference in degree is important. Simply because it does not limit its activities to those which might be assembled under a single roof, the Ford Motor Company is able to encompass a wider range of functions than would be possible to any one-plant concern. Hence there is a further-reaching co-ordination, extending back to basic materials and transport rather than including merely a few selected final processes. To this extent there is an increased autonomy or self-sufficiency and a correspondingly lessened dependence on outside agencies. We seem to be not far from the day when "machines to make machines to make machines" will be owned and used by the concerns which employ the machines of the third generation.

BIG BUSINESS AND MONOPOLY

The ultimate achievement in bigness by any firm is monopoly. Sufficient bigness means monopoly, and monopoly, in turn, makes for large size. There are, in general, two classes of monopolies.

Legal monopolies. The first of these classes, legal monopolies, owe their character to a franchise or other public grant of monopoly privilege. A common example is the patent system by which inventors are given by law exclusive rights, within certain periods of years, to produce the articles to which the patents apply. The purpose of the patent law is, of course, to encourage invention. If inventors were not protected in some such way against losing some or all of the material benefits to be derived from their inventions, it is doubtful that great advances in the way of new products and improved methods would occur in a system of private business enterprise. Thus the monopoly benefits enjoyed by the holder of a patent may be considered the price the community willingly pays for the purpose of encouraging invention.

Another extremely important type of legal monopoly consists of such public-service enterprises as streetcar systems, gas and electric manufacturing and distributing systems, railroads, and telephone companies. Monopolies in these fields exist by virtue of franchises and special public grants. Such enterprises commonly are called "natural monopolies," for the reason that the nature of their business makes competition especially wasteful. Competition would be clearly uneconomical on account of the duplication of facilities.

In some degree or other conditions of natural monopoly apply to many other enterprises. For example, duplication of facilities and productive effort

occurs among competing steel companies, milk delivery systems, and grocery stores. Certainly there can be no categorical difference between fields of industry which are natural monopolies and those which are not. The difference is entirely one of degree. As regards such concerns as steel mills and grocery stores, however, law and judicial opinion have consistently held (except during the period that the National Industrial Recovery Act was in effect) that the public interest is best served by their competitive operation. In a sense the law solves for us the problem of what is a natural monopoly and what is not by declaring certain kinds of enterprise (the streetcar systems, etc., mentioned above) to be natural monopolies, to be affected therefore with a public interest, and so to be subject to certain forms of public regulation. Legal monopolies of this type—as exemplified by electric utilities—and their regulation will be treated in Chapter 13.

Business monopolies or trusts. It is clear that the desire for monopoly has been a prime motive in the movement toward larger-scale enterprise. Yet whether monopoly is a cause, or an effect, of big business is not the most significant issue. The important fact is that there has been a marked limitation of competition through the creation of enterprises large enough to dominate certain fields of production.

Without doubt the corporate form of business organization has greatly facilitated the movement toward monopoly. This is true not only because of the large capital-raising abilities of the corporation as compared to other forms of business organization, but also because of the ease with which the corporate form adapts itself to mergers, consolidations, holding companies, and other devices for limiting competition. It also permits, on account of the so-called immortality of corporations, a fairly permanent set of relationships to be created and maintained among business enterprises through such organizations as trade associations.

In a legal sense the word "trust" stands for voting trust, a device common late in the last century for concentrating control of a corporation, or of two corporations or more, in the hands of a small number of trustees, who were empowered to vote the stock of each corporation as they saw fit. More generally, it has come to mean any business formed by combination or otherwise, which is large enough to exercise some degree of monopoly power. Thus by "antitrust laws" we mean antimonopoly laws, and we speak of the Antitrust Division of the Justice Department as the agency charged with the enforcement of these laws.

Monopoly vs. competition. Monopoly is of course the opposite of competition among producers. We tend to think of monopoly as something which is bad for the consumer, just as competition is supposed to benefit

produce the whole output of his industry, yet exercises monopoly power (for instance, by setting prices which others observe) because he is the largest single producer in the industry. Such cases shade off into those in which firms merely possess such minor strategic advantages as "good will," a favorable location, or a well-known trade-mark. An important objective for every business enterprise is to secure and maintain such advantages. Even the limited local monopoly enjoyed by a newsdealer on a city street corner could be cited as an example of such an advantage.

The economies of large-scale production which provide one basis for the growth of big industrial concerns are physical and technological. On this largeness of operation rests much of whatever hope we may have for greater material abundance and greater economic security. The question of whether particular practices of big business assist or impede the achievement of these ends is an urgent one. This question, in its many aspects, is treated in considerable detail in other parts of this book. The most immediate aspect, monopoly practices and the problems of public policy which they raise, is considered in the chapter which follows.

CHAPTER TWELVE

Monopolies and public policy

THE PROBLEM PRESENTED BY MONOPOLY

All business enterprises appear to be in some degree competitive, in some degree monopolistic. The business monopolies or trusts discussed in this chapter comprise those enterprises which have (through combination or otherwise) secured so great a strategic advantage in their respective markets as to control for practical purposes the price at which their product sells.[1] If they do not control the whole output of the industry, they control at any rate so high a proportion that the remaining producers have little independent influence on prices. Sometimes monopoly is based on patents, or upon the control of some scarce material; sometimes it is sheltered by a protective tariff; or it may be encouraged by the large scale necessary for economical operation. Wherever monopoly situations are deliberately engineered, the purpose is the charging of higher prices and the realization of larger profits than would be possible under competition.

Throughout the history of the United States, the operations of trusts as defined above have been considered contrary to public policy and have frequently been declared illegal. The English common law, which was taken over with many other institutions by the American colonies from the mother country, expressly forbade conspiracies to restrain trade, and made agreements for this purpose unenforceable. On this common-law basis has been erected a structure of statutory laws designed to prohibit monopoly or to "enforce competition." Although various states have enacted legislation to

[1] Although this discussion deals with control by monopolies over *supply* of goods, there are cases in which firms—or groups of firms—control the *demand* for some commodity or service. Such control over demand, as it has applied to demands for labor and for certain agricultural products, will appear in later chapters.

is end, the fact that almost any trust must, by virtue of its very size, en-
ıge in interstate commerce, has caused these state antitrust laws to be
ɾgely ineffective. Hence the important laws in this regard have been those
hich Congress, acting under the authority of the "interstate commerce
ıuse" of the Constitution, has enacted.

IE EARLY TRUST MOVEMENT

The first monopolies, organized soon after the Civil War, took the
ɾm of pools. When a pool is organized, the nominal competitors in a
ɾticular industry divide on some agreed basis the market for their com-
›dity, the volume of its output, or the profits made from its sale. The
chigan Salt Association is an early example. Existing by virtue of in-
ɾmal understandings, or "gentlemen's agreements," the pool was not on
: whole a very effective form of trust. Conflicting interests frequently
ɾeloped among its members. Thus an agreement to raise prices by restrict-
: output might be made; but the higher prices were raised, the stronger
ɜame the incentive for individual members to break away.

More effective as a means of restraining trade was the "voting trust"—
device whose name eventually became a synonym for monopoly. Hold-
of stock in competing companies would turn over their shares to trustees
o voted all the stock, and thus gained complete control of the policies of
several corporations. The stockholders received "trust certificates" in
ırn for the shares turned over to the trustees. Several trusts were success-
y dissolved by common-law actions. New York brought suit against the
ɾth River Sugar Refining Company in 1888, and Ohio sued Standard Oil
Ohio in 1890. In each suit a corporation, rather than the trustees holding
tock, was the defendant. In each the state government claimed the stock-
ɬer of a corporation had no right to turn his stock over to trustees. In
ı the trust was dissolved by requiring the trustees to return the stocks
ch they held to their original owners. The decision of the court was
›ly that such trusteeships were *ultra vires*, i.e., that the powers given by
to corporations did not include the right to maintain such trusteeships.

SHERMAN ANTITRUST ACT

First and most famous of the federal antitrust laws, the Sherman Act,
ıme law June 2, 1890. It is entitled "an act to protect trade and com-
ɜe against unlawful restraints and monopoly." Its principal provisions
ɨist of two short sections. The first section provides that "

tract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared to be illegal." The second section provides that "every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons to monopolize, any part of the trade or commerce among the several states or with foreign nations, shall be guilty of a misdemeanor . . ."

The attempts by the Department of Justice to combat monopoly did not at first realize the full potentialities of the Act. The first case to come before the United States Supreme Court after the passage of the Sherman Act was that of *United States* vs. *E. C. Knight Company* in 1895.[1] The question at issue was whether the American Sugar Refining Company could acquire four refineries located in Pennsylvania, which acquisition would give the company 90 per cent of the nation's refining business. The Supreme Court held that sugar refining was manufacturing and as such was an intrastate rather than an interstate matter. For this reason the acquisition of the four refineries was held not to involve interstate commerce and hence not to violate the Sherman Act. This decision of the court followed from the fact that the Department of Justice, in prosecuting the Knight Company, attacked the acquisition of properties rather than any act restraining trade in the sugar-refining industry.

Later decisions of the Supreme Court differed sharply from that rendered in the Knight case. For instance, in 1899 the Addyston Pipe Company was defendant in a case involving its right to participate in a marketing pool which clearly constituted a selling combination engaged in interstate commerce.[2] The pool was ordered dissolved and criminal charges were brought against its promoters. The decisions in this and later cases clearly showed the willingness of the Supreme Court to recognize the Sherman Act as a measure for enforcing competition. "Restraint of trade" thus became any act or device which had the effect of restraining competition.

INVENTION OF THE HOLDING COMPANY

The attacks made, by the several states and by the United States Department of Justice, on pools and voting trusts led businessmen seeking monopoly to choose forms of organization which might be less vulnerable to attack in the courts. Following the decision in the Addyston case, the

[1] 156 U.S. 1 (1895).
[2] 175 U.S. 211 (1899).

organizers of trusts became more eager than ever to escape the legal consequences of their acts.

Out of this search for a less vulnerable form of trust organization there arose the holding-company device. A holding company is simply a corporation which owns stock in one or more other corporations. To create a combination of formerly competing companies required merely that one of the existing corporations offer its stock to the stockholders of the other companies, at some agreed ratio, in exchange for the stock which they held. A common method was to organize a new corporation and to exchange its stock for that held by stockholders in the several "operating" companies. We should recognize that holding companies may serve purposes which are not in themselves monopolistic—as, for example, the creation of "vertical combinations."

The device of the holding company serves equally well, however, for the creation of "horizontal combinations" with strong monopoly powers. The great attractiveness of the holding company to the trust organizers has been, as Frank W. Taussig remarked, that it "has the advantage for the would-be monopolists, of achieving the result and at the same time concealing it." Besides setting up a system of companies within companies which makes responsibility extremely difficult to allocate, the holding-company form of organization enables a relatively small corporation to gain control over—and thus effectively to monopolize—a very large capital structure in subsidiary corporations. But although control of this kind, exerted through the ownership of only a part of the stock of subsidiary corporations, has been a common feature of railroad, electric-power, and other public-utility holding companies, the holding company combinations in the various fields of manufacturing industry usually have owned all of the stocks of their subsidiaries.

A corporation can legally do only those things which are explicitly authorized by its charter and by the law under which its charter is issued. General incorporation laws always have provided for the issuance of charters, under approved conditions, enabling the corporations thus created to carry on specified productive and commercial activities. To give such legal existence to a corporation for the sole and express purpose that it might own stock in other corporations (without itself being engaged directly in commerce or manufacturing) was a deviation from the earlier principles on which business incorporation was based. The change, however, was made. In this country each state has authority to enact incorporation laws and to issue charters under those laws. These corporations can then do business in any or all of the states.

CONSOLIDATIONS AND MERGERS

A simpler form of combination is the single giant corporation into which formerly competing companies are joined. This form includes the "consolidation" and the "merger." A "consolidation" usually means forming a new corporation which acquires, chiefly through issuing new stock for old, direct ownership of the assets of two or more formerly separate companies. A "merger" occurs when one existing corporation, by similar methods, acquires direct ownership of the assets of one or more formerly separate corporations.

The earlier trusts tended to become converted into one or the other of these more modern forms. Thus the Standard Oil Company of New Jersey, a holding company, was the successor of the earlier voting trust in the petroleum industry; the American Sugar Refining Company, a consolidation, came after the trustee arrangement which was declared illegal in the North River Sugar Refining case. New combinations which arose in previously competitive industries followed the same lines. The United States Steel Corporation (1901) is a New Jersey holding company; the International Harvester Company (1902) is a consolidation which brought into one company, under a New Jersey charter, five formerly competing concerns. In time some of these holding companies were themselves declared illegal. For example, the Northern Securities Company, which was incorporated in New Jersey to hold the stocks of previously competing railroads, was ordered dissolved in 1904 as a combination in restraint of trade which violated the Sherman Act.

THE SUPREME COURT AND THE "RULE OF REASON"

Prior to 1911, the Supreme Court, in passing judgment on cases arising under the Sherman Act, took the position (notably in the Addyston Pipe case, 1899, and in the Northern Securities case, 1904) that any act or form of organization which had the effect of restraining *competition* was in restraint of trade in the meaning of the act. Businessmen and lawyers pointed out, at wearisome length, that, under this interpretation, *all* business is more or less in restraint of trade. It is not possible, they argued, for a concern to enter into transactions or to negotiate contracts without the effects being to restrain or limit competition. However, in 1911 the Supreme Court became more flexible in its interpretation of the law.

In judgments dissolving the Standard Oil Company of New Jersey and

the American Tobacco Company, the Supreme Court enunciated a new criterion for interpreting the Sherman Act. This criterion, the famous "rule of reason," made it clear that the act applied to combinations which restrained competition to an *unreasonable* extent. The business methods and practices of the defendants were taken as evidence in determining the reasonableness of competition.

The "rule of reason" served to clarify the Sherman Act. And, as enunciated in 1911, it did not appear to weaken the law. On the contrary, it became evident that many existing combinations might be adjudged in restraint of trade. The Standard Oil and American Tobacco cases, therefore, gave rise to a large number of other suits against allegedly offending companies. Consent decrees (acceptance by the defendant concerns of terms proposed by the Justice Department) resulted in numerous cases. Important suits which were settled through consent decrees were those against the American Sugar Refining Company, the International Harvester Company, and the Aluminum Company of America.

Among the dissolution suits which came before the Supreme Court in this period, the most important was the one brought against the United States Steel Corporation. This suit, begun in October 1911, was not decided until March 1920. By this time the official opposition to trusts had moderated somewhat. The Steel Corporation had produced goods essential to the prosecution of World War I, and had paid large sums in excess profits taxes into the federal treasury. Several of its competitors testified that the Steel Corporation did not unreasonably restrain competition, but that it did, on the other hand, maintain stability in the industry. Without its conserving influence, they declared, the steel industry would be ruined by cutthroat competitive practices. In finding the company not guilty of violating the Sherman Act, the Court even stated that its dissolution might be a "serious detriment to foreign trade." Thus, as Henry R. Seager remarked, "the rule of reason of 1911 became the rule of business expediency of 1920."

THE CLAYTON ANTITRUST ACT

To clarify the Sherman Act in ways that would enable businessmen better to understand the legality of their actions, and to provide more adequate administration of the antitrust laws, Congress passed, in 1914, two related measures. These were the Clayton Antitrust Act and the Federal Trade Commission Act.

The first of these prohibited: (1) price discriminations among different buyers of a commodity; (2) "tying contracts," which obligated the

buyer of a commodity to buy, from the same producer or seller, other commodities or materials to use with the original commodity (as typewriter ribbons, phonograph records, etc.); (3) acquisition by a corporation of more than limited amounts of stock in another corporation; (4) interlocking directorates in cases in which corporations of more than $1,000,000 capital were involved. Each of these prohibitions, however, was qualified by the phrase, "where the effect will be to substantially lessen competition or tend to create a monopoly."

The Clayton Act declared further that violation of the antitrust laws by a corporation also constitutes violation by individual directors, officers, or agents of the corporation who have authorized or committed the acts constituting such violation, rendering them individually liable to the penalties of the Sherman Act. The act also declared that "the labor of a human being is not a commodity or article of commerce," and that nonprofit-seeking associations of laborers or agriculturists should not be "held or construed to be illegal conspiracies in restraint of trade, under the anti-trust laws." This clause was designed to confer upon labor unions and farmers' organizations a general immunity from prosecution as monopolies.

THE FEDERAL TRADE COMMISSION

The Federal Trade Commission Act, unlike the Clayton Act, is preventive rather than penal. The Act created a Federal Trade Commission of five members. The commission was charged to determine whether the acts of business concerns engaged in interstate commerce were in violation of the antitrust laws, and so detrimental to the public interest. By this provision, the act specifically places interstate business activities, and the practices associated therewith, under the jurisdiction of Congress. This was an entirely new principle so far as forms of enterprise other than common carriers were concerned.

The act declared "unfair methods of competition in commerce" to be unlawful. The FTC was empowered to prevent or to put an end to such methods by serving complaints, holding hearings, and issuing orders to discontinue the practices complained of. The commission was given power, in the event that such an order was not obeyed, to apply to a circuit court of appeals for an injunction. Persons and corporations affected by an order of the commission also might apply for relief to a Circuit Court of Appeals. These courts might affirm, modify, or annul orders issued by the commission.

The purpose of the Federal Trade Commission Act was to prevent violations, rather than to punish violators, of the antitrust laws. The commission, in certain cases in which questions were referred to it by business concerns, gave opinions as to whether specific business practices might be engaged in without danger of violating the law. This was designed to aid in removing some of the uncertainties of businessmen at the same time as it guarded the laws against infringement. During recent years the commission's work has been concerned less and less with enforcement of the antitrust laws, and more and more with the arbitration of disputes between competitors concerning matters of fair trade practice.

DECLINE OF THE ANTITRUST MOVEMENT IN THE 1920'S

The failure of the Department of Justice to secure the dissolution of the United States Steel Corporation in 1920 marks the beginning of a period during which few if any efforts were made to enforce the Sherman Act. Prosecutions dealing with a number of special practices were instituted and some of the practices complained about were held to be illegal. The most notable of these decisions, rendered in 1924, concerned the peculiar system of pricing steel known as Pittsburgh-plus. It had become the practice of steel companies to charge a delivered price for steel products equal to the list price plus freight charges from Pittsburgh. Thus, for example, the Colorado Fuel and Iron Company might sell Colorado-made steel to a buyer in Denver, adding to the list price the freight from Pittsburgh. The Federal Trade Commission held that this practice restrained competition and violated the Sherman Act.[1]

For the time being no further efforts were made to dissolve major corporations on the ground that they were restraining trade through exercise of monopoly power. The reasons for this moderation—some have called it backwardness—on the part of the government in enforcing the Sherman and other antimonopoly statutes is not far to seek. Certainly "trusts," in the sense either of individual enterprises or of associations of firms which controlled a large enough proportion of the output of their industry to raise prices above the competitive level if they wished so to do, still existed. It is possible that they refrained from making use of their monopoly power through fear of further prosecutions. We cannot know definitely. But for the next fifteen years no major dissolution suit was filed and this is due mainly to a different set of factors.

[1] *In the matter of U.S. Steel Corp.*, 8 FTC 1 (1924).

In the first place, under the Republican administrations of Presidents Coolidge and Hoover, official Washington was committed to the view that business should be interfered with as little as possible. For some years at any rate this view appeared to be vindicated by prosperous trade, good employment opportunities, and rising profits and wages. In the second place, from 1920 onwards the cost of living—that is, the prices of the goods and services which consumers buy—declined almost continuously. Business, however much it might still in fact be shot through with monopolies or near-monopolies, could claim during these years that the consumer was being benefited, that the fruits of technical progress were being widely distributed, that the prices of consumers' goods were continually being lowered. Public opinion was convinced or lulled into acquiescence. Above all, business was prosperous and it would be too bad to rock the boat. Government received little stimulus, therefore, from consumer organizations or newspaper editorials in the direction of "trust-busting."

ANTITRUST POLICY DURING THE GREAT DEPRESSION

The Great Depression, ushered in by 1930, was accompanied by a further and more rapid fall in prices. By now the consumer might be out of a job. But, if he still had an income to spend, he was receiving a benefit in the form of still lower prices. There was, as the depression advanced, a declining incentive for the consumer to complain of exploitation by monopolies which overcharged for their products. The emphasis had shifted. Jobs, security, and the restoration of business profits had now become the major concern of government and public alike.

When President Roosevelt entered the White House in March 1933 the Great Depression probably had touched bottom. The distress caused by the slow paralysis of industry during the preceding three years and the enforced idleness of many millions of workers, who had not previously known unemployment, was aggravated by the temporary collapse of the banking system. Something had gone seriously wrong with market processes. Public opinion was prepared for far-reaching changes. That the nation's troubles were due to trusts and combines, or that the way out lay in stricter enforcement of the Sherman Act, was far from people's thoughts. Something had happened seriously to impair business confidence, but there appeared no reason to lay the blame at the door of monopoly. At this juncture, attacks upon business—even predatory business—apparently would not do anything to help. The question of the Sherman Act and its enforcement was therefore pushed even further into the background.

Prices were low—in the case of some commodities at all-time lows—but this meant that profits had in many cases been wiped out. Some enterprises stayed in business only in order to keep their organizations together in the hope of better times. Evidently it was the turn of producers—manufacturers and farmers—to complain. And what producers wanted above all else were higher selling prices for their products. To argue that the slump had been caused by low prices and that prosperity would return if prices could be raised again—what could be more natural? Proposals of ways to cause prices to rise, crackpot or otherwise, tended to win favorable attention from this group or that in business or in government.

THE PERIOD OF "INDUSTRIAL SELF-GOVERNMENT"

The National Industrial Recovery Act (NIRA), approved June 16, 1933, was directed toward raising prices. The outcome of a somewhat complicated political bargain, this act (in its famous Section 7A) granted important rights to organized labor which will be described in a later chapter. But the provisions from which it derives its name were concerned with price-raising, and were embodied in a system of "codes of fair competition" prepared for and by the various industries. A code authority in each industry—usually an existing or specially constituted trade association—was to prescribe minimum wages and prices and standards of competition for the guidance of the industry. The codes were to be approved by the Administration before being put into force, and elaborate arrangements were made to secure compliance. Before the act was finally declared unconstitutional in 1935, some 700 codes, embracing almost all types of industrial activity, had been put into effect.

The ideas embodied in NIRA had already had a fairly long history in connection with the notion of "self-government" for industry. The phrase "industrial self-government" had from time to time inspired (or had been used as a front for) comprehensive claims on the part of trade associations. History is littered with complaints that competition in this or that industry is "excessive" or "anarchic" or "destructive" and must be regulated in order that the industry may be "restored to health." Since 1890 self-regulation of this kind by industrialists had been prohibited by law. Not until 1933 in fact had these claims been listened to or regarded as other than evidence of a desire for monopoly power. The fact that they received attention even at that late time is to be explained wholly by the plight of producers in general and their inability to provide employment for their customary numbers of employees.

THE OBJECTIVES OF NIRA

The act as a whole was, as has already been suggested, an elaborate compromise. Yet it would be going too far to maintain that its provisions were wholly the result of expediency, or to deny that any attempt whatever was made to base them upon economic principle. No consistent defense of the act was made, nor adequate account of the theory underlying it given, at the time of its passage during the crowded summer days of 1933, and its underlying philosophy is still a matter of acute controversy. We shall not go far wrong, however, if we single out two considerations which were certainly present in the minds of some at least of its proponents. There was, in the first place, a desire to increase payrolls and so to stimulate consumers' purchases. Since the realization of such an aim must at the same time increase costs in some measure, this scarcely seems an effective means of turning losses into profits on any wide front. Whether the code provisions of NIRA were or were not well adapted to stimulate business recovery by increasing consumers' purchasing power is an aspect of the matter which lies outside our present scope and will not be further discussed here.

The other consideration which clearly seems to have played a part in the inception of the act is directly related to monopoly. It already has been pointed out that the low level of economic activity and the prevalence of unemployment in 1932 and 1933 was generally associated in the public mind with the heavy fall in commodity prices which had taken place since 1929, and that the sovereign remedy for this state of affairs was commonly believed to lie in a return of prices to their former level—or at any rate a movement in that direction. Moreover the low level of prices appeared often to be due to price-cutting by financially weak sellers, or—in some cases—by exceptionally efficient producers who could undersell their rivals without themselves incurring losses. If this price-cutting could be prevented, if prices could be pegged at a level which would make production profitable even for the less favorably situated enterprises in an industry, the object—so it seemed—would have been achieved. But this involved price-fixing by some authority—the code authority. If this was criticized as instituting for all practical purposes a system of monopolies throughout industry, the reply was made that prices would be raised only to a "reasonable" level, and that the whole scheme was in any case subject to governmental supervision. Furthermore, it was provided that the codes were "not to permit monopolies,"

and if they nevertheless did so (which seemed to many to be inevitable), the President was not to approve them.

THE PROBLEMS RAISED BY NIRA

At the same time the act specifically provided that actions taken by businessmen under the codes "shall be exempt from the provisions of the anti-trust laws of the United States." Which would have more effect, the Presidential power to veto codes that were monopolistic in tendency, or the general absolution granted to infringements of the antitrust laws? The first involved a thorough and continuous use of administrative investigation and discretion if it was to be an effective check. The second repealed for all practical purposes a penal statute which for forty years had been regarded as a bulwark against the use of monopoly power.

In 1934, after the event, a board of investigation, set up to study and report on the relations of the NIRA to the public interest, reported that its net effect had in fact been a notable stimulus to monopoly in a large number of industries. Meanwhile, if the intention of the act had been to raise prices (this had never been expressly stated) it had certainly not prevented such a result. During 1933 (even before the act was passed) and during 1934 a marked rise in prices and recovery in business activity took place. Proponents have not been wanting who have claimed that this result was due in large measure to the act, whether or not monopolistic action by producers was also encouraged. We may concede that in the conditions of that time a recovery in business activity would have been impossible without a rise in prices. But it is pertinent to notice that the recovery and rise of prices apparently antedate even the inauguration of President Roosevelt, and certainly antedate the passage of the act. It is pertinent to observe also that other measures of that period may have contributed at least equally to the recovery of business, notably the public-works program. But with these questions also we are not here concerned.

HOW NIRA FOSTERED MONOPOLY

There can be no reasonable doubt, in the light of later studies, that the effect of the National Industrial Recovery Act, while it remained operative, was to foster monopoly. The agent in this case was no trust, holding company, or other combine, but the traditional trade association. Where the firms in an industry already had formed such an association, it naturally

became the code authority. Where no such bodies existed, new associations were formed. Now clothed with legal recognition and enjoying administrative approval, as code authorities such bodies came to possess powers of persuasion and sometimes of compulsion. Adherence to a code was not itself compulsory, but conformers were granted the right to exhibit a "blue eagle" on their merchandise. This odd bird was so highly publicized that many producers found they could not sell their goods without its blessing.

The means by which monopoly control was exercised were various, but all tended in the same direction. About two-thirds of the codes enforced minimum prices fixed directly or indirectly by the code authority. In most of these, prices were to bear a relationship to some ideal "cost of production plus fair profit." This phrase provides no security for the consumer unless in practice it is interpreted by some independent agency: the code authority did not pretend to be independent, except possibly in the sense that it represented the entire industry rather than any single producer. It was bound to consult what it conceived to be the interests of the industry rather than of the public at large, and in general anything was permissible which a harassed administration would tolerate. In a few industries, such as lumber, soft coal, and petroleum, the code authority was not even bound to take costs of production into account, but could fix prices at any level it chose. In these codes there was not even a nominal restriction upon the use of monopoly power.

Monopoly can attain its objectives not only directly through the control of prices, but also indirectly through the regulation of output. The most striking example of this latter method of control was the case of copper. Both "blue eagle" and "non-blue eagle"—or "bootleg"—copper appeared on the market, according as the producer had or had not observed the output restrictions laid down by the code for copper. In some of the textile industries output was restricted indirectly through control of the hours of plant operation.

By the summer of 1934 many modifications had been made in the administration of NIRA. These came in response to a chorus of protests. Where were the antitrust laws? They were still indeed on the statute book, but they did not apply to codified industries. And what industry had not been codified during the preceding twelve months? The protests, which gathered volume, came from two sources: consumer organizations which now complained of higher prices, and small businessmen who protested that by enforcing restriction of output and in other ways the codes were driving them to the wall. By 1935 radical revision of the act was in pros-

t, when the Supreme Court in the Schechter case declared the entire le-making structure unconstitutional.[1] By a stroke of the pen the whole ly of traditional antitrust law was restored to full operation.

E EXPERIENCE WITH "INDUSTRIAL SELF-GOVERNMENT"

The importance of NIRA today lies only to a minor extent in the legacy ıich it has left behind. The essential features of the collective bargaining use (Section 7A) were re-enacted in the National Labor Relations Vagner) Act, but the remainder of the NIRA disappeared entirely with : Supreme Court's decision. To some extent the interest which the codes)used in businessmen in the subject of trade associations has persisted. To ne extent also the passage of the Robinson-Patman and Miller-Tydings :ts (which are described below) may be regarded as attempts to salvage)m the NIRA some of its provisions regulating trade practices. But the ıin interest of the entire episode lies elsewhere. Its history furnishes a narkable example, which can be only incompletely paralleled in Great itain and other countries, of the lengths to which statesmen can be in-:ced to go in times of emergency in granting powers of monopoly—)wers which some would argue are merely another kind of special privi-ge. It furnishes also an example of the confusions so often inherent in the e of words. Business demanded "self-government in industry," but what took was an installment of monopoly power. One student of NIRA sums) the experiment as follows:

> Business managers . . . had broadened the basis of their calculation of profit compass the interests of each industry as a group, but no further. They were :ginning to resemble very closely in their policies the craft guilds of the middle :es. This measure of concentration, however, possesses neither the merits of the ide distribution of authority implied in free competition nor those of its com-ete concentration in the state.[2]

ECENT PHASES OF ANTITRUST POLICY

With the decision of the Supreme Court in the Schechter case the IIRA experiment came to an ignominious end, and the antitrust laws from ıe Sherman Act down returned fully into force. A fresh, and in some ways

[1] *U.S.* vs. *Schechter Poultry Corp. et al.*, 55 Supreme Court 844 (1935). The Supreme Court held that the act attempted an unconstitutional delegation of legislative power.

[2] A. R. Burns, *The Decline of Competition*, McGraw-Hill, 1936, p. 519.

novel, campaign for their enforcement was undertaken by the Department of Justice under the direction of Thurman Arnold, Assistant Attorney General in charge of the Antitrust Division from 1938 to 1943. With increased appropriations, the division reversed its previous policy of waiting for complaints from the public, or the results of inquiries by the Federal Trade Commission, and proceeded to do much of its own investigating. Public support for the division's activities was enhanced by evidence submitted during 1939 and 1940 to the Temporary National Economic Committee, whose hearings furnished abundant evidence that monopoly was still as serious a problem as it ever had been. A close observer has summed up Arnold's methods as follows:

> Even at the risk of alarming his quarry and facilitating its escape, he announced in advance the types of business activity which were to be prosecuted. To make violation of the law hazardous he usually proceeded by criminal indictment instead of civil suit. To enable his staff to cover more ground and to avoid the delays of trial, he encouraged the termination of cases by payment of fines without formal guilty pleas and by the acceptance of consent decrees designed to safeguard the public interest in the future. The habitual indictment of violators became evidence of a strong enforcement policy, while the termination of most cases by decree mollified those groups which resented the use of the criminal process against business men.[1]

The most important and successful prosecutions instituted by the Antitrust Division during this period concerned the abuse of the patent laws. Many prominent American firms, enjoying patent protection at home, were found to have divided world markets with their foreign competitors. Such arrangements resembled the pools of the early trust movement in the United States; internationally they are known as cartels. The situation was greatly complicated by the fact that many of the patents mentioned originated in Germany but concerned products vital to American defense. It now seems certain that, in some cases at least, the Germans, desiring to prevent certain critically important military items from being produced outside Germany, successfully persuaded the American firms concerned to restrict the development of the German processes in this country. In return the American firms received exclusive licenses, selling agencies, and other concessions from their German partners. The Department of Justice had little difficulty in throwing open many important patents through court orders for com-

[1] Corwin D. Edwards, "Thurman Arnold and the Antitrust Laws," *Political Science Quarterly*, September 1943, p. 342.

pulsory licensing. The most important cases related to optical instruments,[1] magnesium,[2] synthetic rubber and high-octane gasoline.[3]

Other prosecutions were instituted during this period against rings in the manufacture of building materials and in the construction industry. Thus price-fixing agreements in plumbing equipment and lumber were declared illegal. With respect to the construction industry itself, the Department of Justice was less successful. It was found that building costs had been inflated by a variety of practices preventing improvements of method, compelling the hiring of unnecessary labor, limiting the kind of work to be performed by individual craftsmen, etc. These restraints were commonly enforced through agreements between labor unions and building contractors. Hence unions had to be cited as defendants. In *U.S.* vs. *Hutcheson* [4] the Supreme Court ruled that the immunity conferred by the Clayton Act prevents the successful conviction of union officials unless a conspiracy with employers can be conclusively shown. Such conspiracies have been found very difficult to establish.

In conclusion we may observe that, in setting policies for disposal of wartime assets, the federal government was able to exercise in many cases a significant influence upon the degree of monopoly in American industry. Congress saw this opportunity and required, in the Surplus Property Act of 1944, that where possible assets be disposed of in a manner to foster competition rather than the reverse.

The problem may be illustrated with reference to the important case of the aluminum industry. In 1940 the Aluminum Corporation of America owned 100 per cent of this country's aluminum ingot capacity; by 1945 new government-owned plants had more than doubled the capacity of the industry, and capacity owned by Alcoa had become less than half of the whole. Here, apparently, was an opportunity to introduce competition into the aluminum industry; let the government plants be sold to others than Alcoa. Yet formidable barriers stood in the way. Most of the government plants had been built and were in fact operated during the war by Alcoa personnel; apparently Alcoa, almost alone, possessed the management, the technical know-how, the patent rights and the marketing connections neces-

[1] *U.S.* vs. *Bausch and Lomb Optical Co.*, Civil No. 9-404 (S.D.N.Y., July 8, 1940). The German firm was Zeiss.

[2] *U.S.* vs. *Aluminum Corporation of America*, Civil No. 18-31 (S.D.N.Y., consent decree, April 15, 1942). The German firm was I. G. Farbenindustrie.

[3] *U.S.* vs. *Standard Oil Company of New Jersey*, Civil No. 2091 (D.N.J., March 25, 1942). The German firm was I. G. Farbenindustrie.

[4] 312 U.S. 219 (1941).

sary for the successful operation of the plants in peacetime. In fact one, and only one, serious competitor had appeared. This was Reynolds Metals Company, long a fabricator of aluminum, which first began to produce its own raw metal, and broke Alcoa's stranglehold over aluminum reduction, in 1941. Reynolds has bought some of the government plants: for others, Alcoa was the only bidder. At the time this is written, Alcoa, which produced in its own or in government plants nine-tenths of wartime aluminum, still owns about four-fifths of the capacity for producing the raw metal.

FEDERAL CONTROL OF COMPETITION

Legislative restraints imposed upon business practices cover a considerably wider field than the mere control of monopoly. Thus the Clayton Antitrust Act of 1914 prohibited various forms of price discrimination and "tying contracts." These prohibitions were intended to prevent what the law regards as an unfair bargaining advantage from being pressed home. Such practices might lead toward monopoly, or they might merely enrage competitors, suppliers, or customers. In such cases unfairness to competitors often was much more apparent than any tendency toward monopoly.

Indeed the major part of the activities of the Federal Trade Commission in recent years has had little to do with monopoly, although the commission is, of course, also charged with enforcing the antitrust laws. Under the Wheeler-Lea Act of 1938, for example, it maintains an extensive service to investigate the claims made by advertisers of food products and patent medicines. As cases of misrepresentation it has prosecuted firms accused of selling rayon as silk, inferior woods as mahogany, domestic leaf as Havana tobacco, celluloid as ivory. It has also prosecuted cases of fraudulent advertising, of simulated trade names, of deliberate disparagement of competitors. So active indeed has the commission been in these fields that some observers have even complained that it has forgotten its original function—the enforcement of the antitrust laws.

THE ROBINSON-PATMAN ACT

Congress, too, seems to have shifted its interest to "unfair competition," for the two most important statutes of recent years in the field of federal control of business in general—the Robinson-Patman and Miller-Tydings Acts—are concerned primarily with trade practices and have only slight bearing upon the monopoly problem. The Robinson-Patman Act of 1937

reaffirms and extends those provisions of the Clayton Act of 1914 which deal with price discrimination. Under the Clayton Act, it will be remembered, producers were prohibited from discriminating among their customers, i.e., charging less to one customer than to another for an identical product. Under the Robinson-Patman Act the producer is charged with the further responsibility of seeing that these customers do not discriminate among *their* customers on resale. For example, if a manufacturer knowingly sells to a wholesaler who discriminates among his retailer customers, the manufacturer now becomes liable to prosecution equally with the wholesaler. This is an evident tightening-up of the law, and may conceivably hinder monopoly in cases in which discrimination is used to promote it. But mainly it represents an effort by the federal government to promote fairness in competition by equalizing bargaining power among enterprises of different size.

The Robinson-Patman Act also contains a more thorough definition of what constitutes discrimination than did the Clayton Act. Just how must two shipments differ in order that they may be differently priced without incurring a charge of discrimination? Under the law as it now stands different prices may be charged if the shipments differ in quality, in selling costs, in transport costs, or in terms of delivery. Such differences in prices, at least, do not constitute discrimination. On the other hand quantity discounts—always a source of controversy—are now subject to regulation by the Federal Trade Commission, which may set, in any individual case, a maximum size of shipment in excess of which no further rebates may be granted. This provision means that the commission can, if it chooses, set a limit to the advantages to be realized through bulk buying (for example) by chain stores. The commission, however, has not thus far interpreted its mandate in this sense.

The Robinson-Patman Act has had the incidental result of further undermining the legality of basing-point systems. The Corn Products Refining Company manufactures glucose in Chicago and Kansas City, but used to insist on quoting delivered prices on the basis of distance from Chicago. Western candy-makers, who bought their glucose from Kansas City, but had to pay as if it had come from Chicago, complained bitterly. In 1945 the Supreme Court decided such "phantom freight charges" involved discrimination within the meaning of the Robinson-Patman Act, and ordered the company to deliver Kansas City glucose at prices covering freight from Kansas City, and not from Chicago.[1]

[1] *Corn Products Refining Co.* vs. *Federal Trade Commission*, 324 U.S. 726 (1945).

THE MILLER-TYDINGS ACT

The second of the statutes that have been mentioned represents a return to the principles of NIRA. One of the many things demanded of, and to some extent granted by, code administrators was the right to fix minimum wholesale and retail margins in handling goods. In 1933 this practice was defended as a price-raising device, and it has been advocated ever since by certain groups (especially the smaller retailers) as a bulwark against price-cutting and "destructive" competition. The common-law doctrine of restraint of trade (upon which the Sherman Act itself is based) renders contracts which call for a minimum resale price unenforceable in most circumstances. But there is nothing to prevent such a situation from being altered by statute. In fact, beginning with California, practically all the states now have laws which legalize such contracts.[1] On the other hand, these acts do not cover contracts in interstate commerce, and the National Association of Retail Druggists and other interested trade associations consequently pressed for a federal law. The result was the passage in 1937 of the Miller-Tydings Act which removes from the operation of the antitrust laws all contracts calling for a minimum resale price which are valid under the laws of the state in which resale is effected.

This legislation, which clearly does nothing to strengthen the antitrust laws, was favored by many manufacturers in the belief that the sale of branded (and especially of nationally advertised) goods at less than the price set by the manufacturer destroyed the good will which he enjoyed with the public. Yet not all manufacturers, even of branded goods, have made use of the powers given them. The legislation was supported even more actively by independent retailers on the ground that only large stores and chains could afford to "cut prices," and that this competition hit them severely. Wherever a manufacturer chooses to sell his goods on a contract of this kind he can sue any retailer who charges less than the price specified and obtain damages. In some states retailers who cut prices can be sued by their rivals who do not do so. Indeed, in Wyoming the practice has even been made a crime and may be brought to the attention of the district attorney. The Miller-Tydings Act (August 1937), which ties this state legislation together, was opposed both by the Federal Trade Commission and

[1] Perhaps the most famous of these laws is the Feld-Crawford Act in New York. In 1948, forty-five states had enacted statutes of this kind. Contracts involving resale price maintenance were still unenforceable, however, in Texas, Missouri, Vermont, and the District of Columbia.

by President Roosevelt, but its attachment as a rider to an appropriation bill for the District of Columbia saved it from veto. Among the products which it mainly affects are books, drugs, packaged foods, liquors, and gasoline.

Opposition to the Miller-Tydings Act and its tributary legislation has centered in its effect on the cost of living and on the efficiency of retail distribution. These are, of course, two different aspects of the same question. For a rise in the price of branded merchandise (or its failure to decline) means that the consumer pays more, while the retailer has little incentive to improve his merchandising methods. With the danger of price cutting removed, retail margins have on the whole tended to increase. A guaranteed gross profit on each article sold might be expected to lead to the multiplication of small and inefficient retail outlets, none of them doing as much business as they might but all managing to eke out a living. While little direct evidence on this point has so far been collected, a change of the kind indicated is probably in progress. Meanwhile the larger and more efficient stores, which can make profits on a much lower margin than that which the manufacturer prescribes, have tended, especially in the drug and liquor fields, to develop brands of their own which they can sell for as little as they choose. In its final report, the Temporary National Economic Committee recommended, although not unanimously, that the Miller-Tydings Act be repealed.

RESULTS OF THE ANTITRUST LAWS

In 1927 the Supreme Court declared: ". . . whatever difference of opinions there may be among economists as to the social and economic desirability of an unrestrained competitive system, it cannot be doubted that the Sherman Law and the judicial decisions interpreting it are based upon the assumption that the public interest is best protected from the evils of monopoly and price control by the maintenance of competition."[1] That monopoly or near-monopoly is, if unchecked, a source of artificial scarcity, we may agree. That when monopolistic power is exercised the great mass of consumers pay more for what they buy than they would otherwise have to do, appears undeniable. Moreover, the evidence is overwhelming that monopolistic organizations have at times oppressed independent businessmen by methods which could not, on any grounds, be called fair. These facts are the justification of the antitrust laws. And yet the results of fifty

[1] *U.S. vs. Trenton Potteries Co.* et al.

years of this legislation cannot be called satisfactory. The present Justice Jackson, who while Assistant Attorney General of the United States was in charge of antitrust violations, summed up the case as follows:

> A half century of experience has been so inconclusive and uninstructive that business today does not know what policy it wants the government to pursue. A part of the business world vigorously demands laws to protect, preserve, and extend competition. Another part complains of the effects of too vigorous competition which it is the purpose of our laws to maintain. Most men who come to the Department of Justice, complaining of someone else's price-fixing, implore us to tell them how to "stabilize" their own industry, which is a polite term for restraining of competition that they find it difficult to meet. Business men disagree violently whether it is too much competition, or too little competition, that causes most evils in business. Results show, however, that the policies to restrain concentration of wealth through combinations or conspiracies to restrict competition have not achieved their purpose. Concentration of ownership and control of American industry was never greater than today.[1]

What is the explanation of this paradox? Vast sums of money have been spent on prosecutions, volumes and volumes of evidence have accumulated, and numerous decisions favorable to the government have been handed down. And yet the tendency toward monopoly is apparently as marked as it has ever been.

The apologists for the law excuse its comparative ineffectiveness on two main grounds. The first ground is lack of consistent and continuous enthusiasm for enforcement. The investigation of complaints and the collection of evidence has, since 1914, been in the hands of the Federal Trade Commission. But action in the courts rests with the Department of Justice. It is notorious that while some Attorneys General have regarded the enforcement of the antitrust laws as a most important part of their duties, others have apparently found quite different phases of law enforcement much more appealing. This has been reflected in wide variations from time to time in the number of cases brought to court, and in the persistence with which these cases have been prosecuted. The second ground offered in extenuation of the comparative ineffectiveness of the law to date is the contrast which exists between legal technicality and economic behavior. It has often been easy, when one form of combination was declared illegal by the courts, to find another which, for the time being at any rate, could be substituted. An example of this, described above, was the invention of

[1] From a speech by Robert H. Jackson, May 28, 1937.

the holding company after the voting trust had been outlawed. Further, the rules of the courts as to the admissibility of evidence, coupled with the care taken by some businessmen to put as little as they could into writing, have sometimes made it impossible to prove a condition which everyone recognized to exist.

THE PROBLEM OF POLICY

Policy with regard to monopoly is a matter about which it is by no means easy to make up one's mind, still less to dogmatize. Certainly if we favor the objectives of the Sherman Act, and if we believe that its enforcement is feasible, our course is clear enough. We should demand of the Department of Justice that it make more continuous and thoroughgoing efforts to enforce the law. In its final report, issued in 1941, the Temporary National Economic Committee made this unanimous recommendation:

> The extended study of the concentration of economic power made by this committee leads inevitably to recommendations to strengthen the enforcement of the antitrust laws. . . . The Department of Justice and the Federal Trade Commission are the agencies clothed with the responsibility for enforcing the statutes which Congress has so wisely enacted to curb monopoly and to free enterprise from the restraints of price fixing, collusive agreements, and other restraints of trade. Confronted with the present-day American economy, they are admittedly undermanned and meagerly budgeted. No law . . . can be stronger than the zeal and resources of the agencies of enforcement into whose care it is entrusted. We strongly urge the absolute necessity of providing funds for these agencies adequate to the task which confronts them.[1]

In addition to urging more vigorous enforcement of existing law, the TNEC recommended certain amendments for consideration by Congress. These would compel the unrestricted licensing of patents, would limit the activities of trade associations, would forbid certain types of mergers except with the approval of the Federal Trade Commission, and would increase the maximum penalty for violation of the antitrust laws from $5,000 to $50,000. These proposals evidently rested upon the belief, widely held, that since 1890 public policy in the matter of monopoly has been moving in the right direction, and that all we should ask is for it to move further and faster in the same direction.

[1] *Final Report and Recommendations of the Temporary National Economic Committee*, Senate Document No. 35, 77th Congress, 1st Session.

IS "FORCED COMPETITION" FEASIBLE?

Nevertheless, doubts persist in arising. Actually, the policy of maintaining competition by penal action is a remarkably paradoxical one. The trend of nineteenth-century liberal economic thought from Adam Smith through John Stuart Mill, and surviving in many quarters to this day, supported noninterference with business—*laissez faire*—not because this was what business asked (as is nowadays so often the case) but in the interests of the great mass of consumers. If economic enterprise is subjected to a minimum of restraint, it was argued, competition would ensure that consumers' demand would be reflected in a plentiful supply of goods at the lowest prices at which they could be produced. If competition appeared "anarchic" or "destructive," the results were not entirely bad; consumers—and everybody is a consumer—would be all the better served. If, as a result of such competition, some producers were driven to the wall, their places would be taken by more efficient ones.

The only governmental function in the economic sphere was to serve as umpire by enforcing contracts, preventing fraud, and maintaining a system of coinage, weights, and measures. But by the 1880's it began to appear that things did not always work out that way. *Laissez faire* had led, so it seemed, to less and less competition and to more and more monopoly. The situation which *should* have obtained under *laissez faire* had therefore to be legislated into existence. So it was that Congress passed the Sherman Act, and yet, as Burns has concluded, "the anti-trust laws have been a notable failure as a means of maintaining competition." [1]

It is possible to dissolve a combine into its constituent parts. This has frequently been done. But although this may notably diminish the concentration of monopoly power, it is usually inadequate to restore competitive functioning to the industry—for two reasons. First, it is impossible to be sure there will be no understandings, implied or otherwise, between the new firms. Second, there will not generally be sufficient firms in the industry, even when the combine has been dissolved, to insure a regime of anything like perfect competition. The more efficient firms may obtain a disproportionate share of the market; firms may accept the "leadership" (as it is called) of one of their number in setting prices; some firm may develop a proprietary brand which gives it an advantage. While true monopoly might be absent, such a situation would have to be classed as "monopolistic competition." For the fundamental difficulty which faces attempts to establish

[1] A. R. Burns, *op. cit.*, p. 523.

or increase competition in many industries lies in modern industrial techniques. The optimum size of the firm, judged by standards of technical efficiency, is often so large that in the case of many mass-produced goods there is room for only a small number of producers.

POSSIBILITIES OF MORE FLEXIBLE REGULATION

Would it not therefore be better to seek some alternative to the mere (even if perhaps more rigorous) enforcement of the antitrust laws? [1] There are already certain industries—electric power and telephones, for example—in which no attempt whatever is made to enforce competitive behavior. There are others—the railroads may be cited—in which competition within the industry plays at best a subsidiary role and has almost no part in fixing the price of the product (in this case transportation). Each of these industries is supervised, and rates and other matters are determined, by an official commission charged with this task. With the conservation of resources principally in mind, direct regulation has also been tried in oil and in bituminous coal; here monopoly was a subordinate issue. In no manufacturing industry has anything of the sort been put into practice as yet, even experimentally.

The fixing of railroad rates by the Interstate Commerce Commission and the prosecution of, say, the United States Steel Corporation for violation of the antitrust laws by the Federal Trade Commission, are both examples of the exercise of power by the federal government under the interstate-commerce clause. In both cases this power is exercised in the interest of the public at large and against particular economic groups. The two cases nevertheless present a remarkable contrast. Public-utility regulation is continuous and has undoubtedly been highly effective, perhaps for that very reason. With the antitrust laws, prosecution is spasmodic, and has been shown to be highly uncertain, both as regards the attitude of the courts and as regards the permanent effect of the decisions handed down, even if these have been favorable. Might it not be possible, many people have asked, to apply the first method more widely, perhaps in modified form? In those industries in which it seems difficult or impossible to enforce competition, even by successful prosecution, might it not be wiser to recognize the inevitability of some degree of monopoly? If it cannot in fact be prevented, might we not do better instead to attempt to control it?

[1] This line of thought has been developed recently by A. R. Burns, *op. cit.*, Chaps. XI and XII; and by J. N. Frank, *Hearings*, Part 5, Temporary National Economic Committee, 1939, p. 1953 ff.

CONCENTRATION WITH PUBLIC CONTROL

Those who have advocated such a policy have sometimes been accused of desiring to revive the National Industrial Recovery Act. A careful differentiation, both of ends and means, is necessary on this score. For the NIRA involved primarily, as we have seen, an attempt (in a period of emergency) to rely upon industrial self-government. The proposal indicated would call for regulation, not by the representatives of an industry, but by an independent commission.

Evidently more than one solution to the monopoly problem is possible. Experience with public-utility regulation offers a possible alternative to antitrust enforcement. And there is a third alternative: public operation. The models developed by the Post Office Department, the Inland Waterways Corporation, and the Tennessee Valley Authority, and by many state and municipal enterprises, might offer acceptable solutions. The commonest objection to public operation is the apparent unfairness of government competition with private business. Yet the taking over by the government of an industry as a means of dealing with the monopoly problem could hardly be open to this objection. Although the Labor government in Britain in 1945 was committed to public operation of industry for many other reasons, we may notice that the existence of monopoly in the British steel industry made that industry appear to many Britons to be a specially urgent candidate for inclusion in their nationalization program.

If any such alternatives to antitrust enforcement are seriously considered—if the spheres of public-utility regulation or of public operation should be broadened—common sense suggests two very necessary cautions. First, careful and judicious experiment would obviously be necessary. None of the fields at present subject to these policies, fields in which monopoly has long been recognized as the normal state of affairs (e.g., the electric utilities), provide any adequate precedent for regulating fields which are traditionally regarded as competitive (e.g., manufacturing and mining). New forms of control and new techniques of management would undoubtedly have to be developed if either experiment were tried. Second, even those who feel that the antitrust laws have broken down in those fields in which monopoly is endemic do not question the desirability of enforcing the law elsewhere. The common-law doctrine which was codified in the Sherman Act has too long and too highly valued a history to be lightly cast aside. In those fields in which competition *can* be effectively maintained, it would seem folly to abandon the first safeguard of the consumer.

CHAPTER THIRTEEN

Public regulation of monopoly: the case of electric power

The task of government in regulating public utilities is difficult and crucial. The whole conception of public control of private monopoly is on trial. If the methods now being used are workable, they may well become the pattern by which we will control other industries, such as steel, petroleum, and meat packing, which were once deemed competitive, but in which competition has been waning. If these methods are not successful, shall we turn to government ownership and operation? Merely to raise such questions shows that the workings of regulation in the field of public utilities are a test of whether the interests of private enterprise can be harmonized with the interests of the public.

THE PURPOSE OF REGULATION

When the state regulates the prices charged and the services supplied by an industry, it necessarily interferes with the managerial policies of private enterprise. By what right does the state do so? The federal government regulates chiefly under its "interstate commerce" powers. State governments regulate under the aegis of the "police power," which is the broad power to legislate with regard to public health, safety, morals, and welfare. It is commonplace in law that states may regulate any business that is "affected with a public interest." But what is an industry "affected with a public interest"? Bluntly, it is one which is declared to be such by the legislature, and admitted to be such by the courts. One may search the decisions of the courts in vain for some principle which will permit the establishment of a definite category of "public interest" enterprises. Each case is decided on its own merits, and though at times the Supreme Court has been reluctant to declare a business to be affected with a public interest, the general tend-

ency seems to be to enlarge the category of regulated public utilities. The chief members of this group are: railroads, electric light and power, natural and manufactured gas, street railways, busses, telephone and telegraph, motor and water carriers, pipe lines, grain elevators, warehouses and stockyards. The extent of regulation in each field varies. Problems encountered in the regulation of the electric-power industry are as acute as any, and these are here selected as a case study.

Why are public utilities regulated? The basic reason is that the public believes that it cannot rely upon the force of competition to insure the supply of an essential service at the lowest price consistent with the quality and quantity of service that it requires. Public utilities are a type of business in which competition is not present, or, if it is, does not function satisfactorily. Sometimes monopoly exists because of the possession of unique locations—as, for example, water-power sites. Again it often exists because competition is self-destructive and wasteful. This is the case because the huge investments of utility companies are virtually "sunk," and so give rise to fixed costs which are very high relative to operating expenses. Once price-cutting begins between two competing utility enterprises, it tends to go to absurd lengths. Prices are cut to the bone—i.e., to a point where they barely cover the relatively small out-of-pocket expenses of providing the service. The end comes only when one company is ruined or is absorbed by the other, or when the companies agree to maintain prices or to combine their operations.

Some public-utility monopolies grow up because physical conditions set limits to the existence of competing plants. Confusion and waste occur if several electric or gas companies compete for business in a single street, or even in a single town. Finally, in the interest of good service, a monopoly may be far more desirable than competing companies; consider the nuisance of competing telephone lines in a single territory. For these reasons, severally or together, it is usually more economical for one enterprise to serve a certain area than to attempt to maintain many small competing enterprises in the same area.

Monopolistic control of the market, though important, is not sufficient to bring about price regulation. Public utilities are regulated not only because they tend to be monopolies, but also because they provide services or commodities that are generally regarded as vitally necessary to the modern way of living. True, there are substitutes for all utility services except water, but these substitutes are not ordinarily deemed to be satisfactory. It is the combination of monopoly and peculiar necessity that enables an unfettered

utility company to collect exorbitant charges and to discriminate arbitrarily among customers. Indeed the power of a utility company to charge for service is akin to the power to tax; it is far too great a power for good or evil to be entrusted unreservedly to any private authority. Hence the state regulates.

It is not enough for a legislature and the courts to agree that an industry may be regulated. How far may the state go in regulating? One important limitation to regulation is that the property remains private. It is protected by the due-process clauses of the Fifth and Fourteenth Amendments to the United States Constitution.[1] The courts have long held that the right to receive profits is an essential attribute of property. Any law or ruling, therefore, which, in the eyes of the court, unduly limits the profits of a business may be declared "confiscatory" and hence unconstitutional. Herein lies the protection of the private utilities; they flee to the courts from the edicts of the commissions, for the courts have the last word on whether a ruling is or is not confiscatory.

THE DEVELOPMENT OF ELECTRIC-POWER REGULATION

The present system of state regulation of electric and other local public utilities dates back to 1907. Before that time, several different forms of regulation had been tried and found wanting. Attempts to maintain competition between companies in a given territory had been wasteful and ineffective. Legislation specifying maximum charges had resulted in rigid, spasmodic, and inept regulation. Franchises, which conveyed monopoly rights, were poor instruments of control; they were not flexible, were not self-enforcing, and were open temptations to graft and bribery. Finally, municipal authority did not extend beyond the bounds of a city, and hence could not cover the entire area of a utility company's operations, which was constantly widening as a result of advances in the arts of generating and distributing power.

By the end of the century, it was obvious that the old methods of local control could not be relied upon, and that some new method of regulation was needed. The new system was to be one of "scientific" regulation by administrative commissions created by the state. These bodies were to be armed with strong powers to regulate a number of utility industries. Their

[1] These famous clauses are as follows: the Fifth Amendment declares, apropos of the federal government, that no person shall "be deprived of life, liberty, or property, without due process of law"; the Fourteenth Amendment declares that no state shall "deprive any person of life, liberty, or property without due process of law."

job was to protect the consumers and to do justice in the conflict of interests between the public and the utility corporations.

Modern state public-service commissions were first established in 1907 in Wisconsin and New York. Other states rapidly followed; by 1921 there were commissions in all states (and the District of Columbia) except Delaware. Typically, the public-utility commission has jurisdiction over several kinds of businesses: electric light and power, gas, railroads, street railways, telephones, water, motor busses. Our concern here, however, is with electric light and power. This field has furnished the largest amount of experience in control through state regulatory commissions.

POWER REGULATION BY STATE COMMISSIONS

From the outset, regulation by state commissions was more effective than the confused system of local control that it displaced. Though the terms of the enabling acts varied widely, those which were most comprehensive were well suited to remedy the evils at which they aimed. The steps taken by the commissions served to justify the innovation of administrative regulation and met with the approval of both the public and the utility companies. The former enjoyed better service and protection from discrimination; the latter were relieved of the threats of competition and local political persecution.

From the outset, however, serious problems had to be faced. Rising costs during World War I led many companies to ask for rate increases. When the commissions granted such increases in order to insure good service, the rate-paying public protested. After the pressure of emergency, commissions reduced some rates; but they were opposed by the companies, which claimed that they should receive a return upon their property as revalued at the higher price levels. The courts were inclined to be sympathetic to this claim, and commissions perforce went slowly in reducing rates. In the meantime, technological advances stimulated a vast movement for the integration of physical properties. The larger scale of operation and the more intensive utilization of facilities resulted in substantial savings in costs and additions to earnings. Managers and financiers sought to retain these savings by taking steps to maintain a legal claim to revenues as high as they could possibly collect from customers, by: (1) insisting upon a "fair return upon fair value," which took the form of resisting all attempts of regulators to reduce rates; (2) issuing securities which represented capitalization of earning power; (3) organizing holding companies in order to siphon profits from the operating companies.

To protect this vulnerable position from public action, the electric utility companies devised a powerful and elaborate propaganda machine. The purpose of the propaganda was to convince the public that regulation was successful and that stronger regulation or public ownership was not only unnecessary but also destructive, un-American, and bolshevistic. Public-utility and holding-company securities were pictured as representing claims to protected earnings that loomed large in the rosy mist of the future. Thousands of consumers and employees were sold power securities of all kinds. This was heralded as the coming of a new day of real "public ownership."

By the end of the 1920's, Congress and several states ordered sweeping investigations of utility practices and of the effectiveness of regulation. The investigating bodies found overwhelming evidence that the system of administrative regulation had to be overhauled or discarded. Public concern with these disclosures was turned into open hostility by the failure of several holding-company systems (notably that dominated by Samuel Insull), which brought losses to thousands of small investors. All this led to the swift forward march of public action on electric power. During the thirties (especially 1930-36), gaps in the statutory powers of state commissions were plugged up, and new powers were granted. Public unrest during the depression forced state commissions to take action. More important, however, was the expansion of federal control, and the beginning of a program of public ownership. With this background, we turn to examine in greater detail the several aspects of state control.

POWERS OF STATE COMMISSIONS TO CONTROL RATES

Table 14 shows the number of commissions that had (or did not have) jurisdiction in January 1947 over important aspects of electric-utility operation. Clearly, there are serious geographical gaps in the system of state control. Aside from Delaware, which has no commission, commissions in Florida, Iowa, Minnesota, Mississippi, Nebraska,[1] South Dakota and Texas did not have general power over rates and services of electric utilities. Even more important, however, are the variations in the actual exercise by commissions of the powers they possess.

The basic problem in the regulation of electric utilities is that of rate-making. The usual legislative standard is that rates must be just, reasonable,

[1] However, privately owned electric utilities in Nebraska are few and small.

Table 14 SCOPE OF COMMISSION JURISDICTION OVER ELECTRIC UTILITIES, 1947

(number of states having commissions with jurisdiction indicated)

	Fairly extensive	*None or limited*
Rates	41	7
Service standards	41	7
Accounting	41	7
Certificates of convenience or necessity	30	18
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and nondiscriminatory. Commissions with rate-making authority may prescribe rates for the future, but only after hearings have shown that the existing rates are unreasonable. The right to initiate rates still belongs to management, but the commission can inquire into them upon its own motion or upon complaint. To help speed rate reductions, many state commissions have been given power (especially since 1930) to prescribe temporary rates pending a complete investigation. Full publicity of schedules of charges is always required, and departures from rates are illegal. Any sort of discrimination, undue preference, and undue prejudice in rates (as well as in service) is specifically forbidden.

The power of state commissions over rates is not as far-reaching as it may appear to be. It is not a simple task to fix a "just" or a "reasonable" rate, and since the legislatures have not specifically defined these terms, commissions often find that the courts differ with them on the meaning of the terms in specific cases. The chief obstacles met by commissions in fixing rates are discussed below. Suffice it to say here that the weaknesses in the regulation of rates by commissions have led to many demands for a scrapping of the entire system of administrative control.

CONTROL OVER SERVICE BY STATE COMMISSIONS

The quality and quantity of the service rendered is scarcely less important to the public than is the rate charged. Poor or unsafe service, with frequent breakdowns, is expensive even at a low price. Commissions have gone far in prescribing standards of service with respect to matters such as extensions of service within the franchise area, maintenance of voltage, use of alternating current or direct current, service interruptions. They investigate and prescribe the kinds of meters to be used, inspect and test such

meters, and issue rules on such matters as meter reading, billing, collecting, discounts, turn-offs and turn-ons of service.

Another phase of service is the entry into, expansion of, and abandonment of, service by electric utilities. In thirty states utility companies must now obtain a certificate of convenience and necessity from the public-service commission before they can initiate service. By this means commissions are able to restrict uneconomical duplication of facilities. Moreover, rural territory may be allocated among utility companies in about one-half the regulating states. Few difficulties have arisen as to abandonment of unprofitable electric service. The general rule is that the company must take the lean with the fat, and, as long as a company is making a fair return on the whole of its business, it must continue to serve that part of its territory in which it incurs a loss. Obviously this rule cannot be pushed too far.

On the whole, commission control of service standards and service entry and abandonment has been successful. Though hundreds of complaints with regard to service come before the commissions each year, they are usually settled quickly by informal negotiation. Electric companies have found that it is a good business policy to give good service. Complaints that service is inadequate, and that requests for service are ignored, have come chiefly from rural areas. Utilities have been reluctant to venture capital in rural territories where returns are risky and meager when they have been able to obtain larger returns elsewhere. Commissions, however, cannot command utility companies to develop unexploited fields. In the last few years, therefore, the United States Rural Electrification Administration has been actively financing the construction of rural electric lines and facilities by cooperative agencies as well as private utility companies.

COMMISSION CONTROL OF ACCOUNTING AND REPORTS

Without a well-devised system of uniform accounts, commissions are unable to ascertain the basic facts and necessary details upon which their work is based. Commissions also must have power to call for annual reports and to require the utility companies to produce whatever information is needed for regulatory purposes. These powers are basic and are now widely held.

All except two state commissions regulating electric utilities have adopted a standard system of accounts for utilities under their jurisdiction. These systems are modern and leave little to be desired in completeness; they differ little from state to state. Uniform systems of accounts have improved the nonstandardized and incomplete accounting practices previously

in vogue. But the mere prescription of accounts is not a guaranty of good accounting practice. Because of the small staffs at their command, most commissions have not been able to audit the private records so as to check their accuracy and veracity. Again, because of unwillingness to interfere with management functions, most commissions have not prescribed the methods to be used in computing depreciation.

CONTROL OVER SECURITY ISSUES

Capitalization (i.e., face value of stocks and bonds outstanding) of a utility company is of utmost importance to consumers and investors. It might seem that capitalization is of no concern to the rate-payers, because commissions fix rates upon the basis of the "fair value" of the property rather than according to the amount of stocks and bonds issued. But experience has shown that overcapitalization always threatens—and is frequently very harmful to—the public interest. An inflated capital structure means poor credit in the long run, except under conditions in which earnings are excessive. A utility with poor credit standing cannot, economically, attract new capital for the betterments and additions which the public constantly requires. And when a company is overcapitalized, it makes every effort to earn enough to meet its large dividend and interest requirements. In particular, it will try to obtain as high a valuation as possible on its property, so that it may legally charge the most that the traffic will bear. It will also try to maintain profits by cutting down on maintenance and repairs; this leads eventually to poor and unsafe service. These consequences of overcapitalization cannot be avoided by fixing rates upon the basis of a fair return on fair value, because commissions and courts find it difficult, and even impossible, to ignore the financial needs of the utility companies if it seems likely that the service will be harmed.

Despite sad experience with the need for security regulation, only thirty-three state commissions have power over the issuance of securities. Usually, in these states, before a utility may issue securities it must obtain authorization from the state commission. Formally, authorization rests on examination of matters such as the purpose of the issue, the price and terms of the securities, the relation of the new issue to the company's existing capital structure and earnings. Commissions often have been lax in these proceedings, as well as with respect to checking the actual disposition of the proceeds of the issue. Some few commissions, however, have exercised real control, partially by working out the details of a particular issue in advance through extended conferences with the utility. Finally, gaps in the

state power to regulate issuance of securities have to some extent been filled by the federal power legislation of 1935, which will be described later in this chapter.

CONTROL OF INTERCORPORATE TRANSACTIONS AND RELATIONSHIPS

When utility corporations combine, several queries arise. Does the combination result in economies? If so, do rate-payers and investors share equitably in the benefits? Or is the combination effected merely to concentrate financial control and to create an opportunity for issuing excessive amounts of securities? Commissions have often found themselves powerless to raise these and similar questions with the companies concerned, or to compel recognition of them as relevant issues. Even when they have done so they have not always been able to prevent practices which were financially, technically, and economically unsound.

The two general types of intercorporate relationships that are important for the present purpose are holding companies and interstate transmission of power. Bankers, promoters, and sometimes managers have found the holding company to be an attractive method of controlling operating companies. They have found it so because (1) control of operating companies may be highly concentrated with a relatively small investment, and because (2) state commissions could not, or did not, regulate holding companies in any important respect. Interstate transmission of power grew tremendously as networks of power lines spread over the country, and here too the states found that they were legally impotent to intervene on behalf of the public. Despite a decision of the Supreme Court which upheld the attempts of state commissions to inquire into the contractual relationships between holding and operating companies, and despite increased authority received from legislatures, state commissions were for long unable to cope with the main problem of interstate control. The enactment by Congress of the Public Utility Act of 1935 (see below) was an attempt to fill these serious gaps n power regulation.

:OMMISSION ORGANIZATION AND PROCEDURE

The quality of regulation depends upon the character and ability of :ommissioners, the resources in men and money at their disposal, and their onception of the job. In a majority of states members of commissions are hosen by governors, but the office is an elective one in eleven states, princi-

pally in the South. Elective commissioners are often swept into office by a party vote or in an unreasoning response to a demagogic attack on utility companies; sometimes too, utility commissions engage in politics so as to nominate and elect fellow commissioners who will see eye to eye with them. There is little assurance that the man elected is well qualified by training and experience to be a good commissioner. Perhaps fortunately, the trend has been toward the appointment of commissioners. But this method, while proved in practice to be superior, does not assure competent membership. All too often, commissioners have been appointed for political reasons, without regard to their capacities and technical ability or to their views on regulation. Moreover, tenure of office often is too short for a new man to learn his job thoroughly, and even when the term is long enough, commissioners may leave their training school for better-paying jobs in private business.

In making decisions, commissioners are strongly influenced by the knowledge, experience, and attitude of their staffs. But the ability and size of the staff depend largely upon legislative appropriations. As a whole, commissions have been underfinanced. It has been estimated by competent authorities that in the year 1935-36 thirty-five state utility commissions spent a total of little more than $6,000,000 in regulating all types of utilities within their jurisdictions. Of this sum, almost one-half was spent by the four largest commissions. The property to be controlled was valued at more than $25,000,000,000 (even if railroads are excluded). In 1936, the annual electric revenues alone were two billion dollars. This parsimony in commission budgets has led to neglect of various statutory duties, to lack of independent study and investigation of "long-run" problems, and to inability to co-operate satisfactorily with other public authorities, such as municipalities and federal boards. That a weak staff means weak regulation is now being recognized, and commission staffs gradually are being reorganized and strengthened.

During the 1920's many commissioners took the attitude that their jobs were judicial in nature, and this attitude weakened regulation. Commissions were originally conceived as agencies which should take positive steps to reduce rates, to improve service, and to achieve other ends important to the public interest. In the period following World War I, however, many commissioners proceeded upon the belief that their function was judicial, and so sat back, waiting for the public to bring complaints to them and then deciding, upon evidence presented to them, what the justice of the case was. But consumers are poorly prepared to bear the heavy burden of proof, especially in a contest with a company which has all the facts, and

as much money as it needs, at its own disposal. The situation was so bad that critics charged that the commissions had abandoned the consumer. But the political and economic forces at work in recent years have helped to raise the administrative function to its original position of equality with the judicial.

PROBLEMS IN RATE REGULATION

Probably the most controversial and bitterly fought issues in utility regulations are those relating to control of the price of utility services. The statutes require utility rates to be "reasonable." Yet utilities oppose the efforts of public authorities to limit their net earnings, or to determine the methods of pricing. Experts who agree on the need for regulation disagree on the objectives to be attained and the standards of rate determination to be applied. Finally, the courts, which have assumed the power to review the reasonableness of rates fixed by public authority, have contributed to the difficulties of regulation by insisting upon vague standards which neither they nor anybody else has been able to define clearly.

The reglation of rates involves two basic problems. The first is that of fixing the total revenues which a company is entitled to receive from all its customers—i.e., the level of rates. The second problem is to collect this total amount from the various classes of customers by means of specific rates. The two problems are, of course, closely interrelated: any change in the level of rates can be effected only by changes in the structure of specific rates; moreover, the amount of each of the specific rates influences the demand for service and, hence, the output and the total costs and revenues. For clarity of analysis, however, the two basic problems may be discussed separately.

A "FAIR RETURN" ON A "FAIR VALUE"

At present, the method of setting the general level of rates is guided by a rule of the Supreme Court first enunciated in 1898 in *Smyth* vs. *Ames* (169 U.S. 466). A utility company has, under ordinary circumstances, the right to charge such rates as will yield it a "fair return" on the "fair value" of the property it devotes to the public service. Such a "fair return" is, of course, in addition to all necessary operating expenses, taxes, and annual depreciation. Out of the fair return, the utility company pays interest and dividends to its investors.

Commissions must, therefore, test the reasonableness of rates by reference to a fair return on fair value. How is this done? The following illustration shows, in simplified fashion, the method of determining the total revenues to be collected:

Fair value	$1,000,000
Fair rate of return (assumed to be)	7%
Fair return	$70,000
Operating expenses	$180,000
Total annual revenue (to be collected from consumers)	$250,000

The company in the above illustration is entitled to charge rates sufficiently high to yield $250,000 annually, out of which it meets its annual expenses of operation and keeps a fair return as compensation for the use of its capital. Interest on bonds and dividends on stock come out of the fair return. The "fair rate of return"—7 per cent—is merely assumed here; in practice it is a rate which may be lower or higher before courts or commissions will deem it unfair.

The principle of fair return on fair value is intended to provide a measure of the return to be secured above costs of rendering service. On the other hand, however, a utility company is not *guaranteed* a fair return if it is unable to earn all that it is legally entitled to earn—because of competition, business depression, or inefficiency of management. In such instances, the value of the service limits earnings to less than a "fair return"; witness the case of railroads during the thirties, when very low returns were earned.

Thus, commissions are theoretically required to allow at least a fair return on fair value.[1] The first step, then, is to determine the "fair value" (or, more accurately, the "rate base"). Though the criteria of fair value have been discussed at length by the courts, the basic opinion is still that of *Smyth* vs. *Ames*. This opinion is so important and so far-reaching that it is quoted here:

> We hold, however, that the basis of all calculations as to the reasonableness of rates . . . must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under par-

[1] Legally, they may allow more if they believe it economically desirable and reasonable to do so; actually, the level of compensation usually is so high that few commissions have felt justified in establishing reasonable rates on any higher level.

ticular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be others to be regarded in estimating the value of the property. . . .

This broad statement left the door open to debate on the criteria of fair value; debate, indeed, has never ceased. Succeeding decisions have wiped out some of the irrelevant criteria mentioned by the court (such as operating expenses), but they have consistently upheld the spirit of the decision—namely, that the fair value is a judgment in which several considerations must be given due weight. The weight to be given to each consideration has been the cause of controversy.

"CAPITALIZATION" AND "MARKET VALUE" AS MEASURES OF VALUE

Two of the criteria of value mentioned in *Smyth* vs. *Ames* may be discarded as totally unreliable and unsound. The amount of bonds and stocks would seem to be a good measure of the sums of money contributed to the capital of the company by investors. But it is common knowledge that the par or book value of securities is not necessarily (or even usually) the same as the amount of money invested. The records of moneys received and actually invested may have been incomplete or lost, destroyed or altered. Capitalization is of little use in fixing the basis for rates, except where (as in the case of Massachusetts) the issuance of securities, the investment of money, and other financial practices have been strictly and continuously supervised by a regulatory commission. When this is done, capitalization (and surplus) do represent the amount of actual investment in the enterprise. Of original investment as a measure of value more will be said later.

Market value is another unsound criterion of property value. In *Smyth* vs. *Ames* the court mentioned both the market value of stocks and bonds and the probable earning capacity of the property under the rates presented. The former is not pertinent, for the market value of stocks and bonds may be exaggerated by manipulation. In the long run, the market value of stocks and bonds is determined by capitalizing the prospective earnings of the business. This is a fair method of determining the value of the property of ordinary competitive enterprises. But it cannot be used where the earnings are not competitively determined, as in a public-utility industry.

To use market value as a basis of rate-making is to make rate regulation futile. The process of rate-making would be a circular one, as the following illustration shows. A company has net earnings (after deduction of all ex-

penses) of $1,200,000 per year. Its rates are attacked as being exorbitant. It shows, however, that the market value of its property is $20,000,000 if earnings are capitalized at an assumed fair rate of return of 6 per cent ($1,200,000 divided by .06 = $20,000,000). Market value is assumed to equal fair value. Now if the company is entitled to a rate of return of 6 per cent upon fair value, it completely justifies the past earnings of $1,200,000 ($20,000,000 times .06 = $1,200,000) and thereby demonstrates the "reasonableness" of existing rates. Thus capitalization of earnings assumes in advance that the rates in question are reasonable. Nor can market value be determined merely by going into a market for utility properties as such, for large properties are not bought and sold in thousands every day as are shoes, trucks, or securities.

With market value eliminated, two other criteria for fair value remain, viz., reproduction cost and original cost. A refinement of the original-cost criterion known as the "prudent investment" principle, will be described below. The arguments advanced in favor of one or the other of these principles in any specific case are usually complicated, tortuous, and opportunistic. A historical review of the controversy over the proper basis for fair value shows no consistency in arguments; the only consistency which can be observed is that consumers and their representatives argue for cost of reproduction or original cost, *whichever is lower*, whereas the companies argue for cost of reproduction or prudent investment, *whichever is higher*.

COST OF REPRODUCTION

With the passage of time, two main criteria of fair value remain, viz., reproduction cost and original cost. The usual meaning given to reproduction cost by those who argue for it (chiefly the utilities) is the cost of reproducing the existing property as it stands at the time of the rate inquiry, using present methods of construction, under existing conditions, and paying the prevailing prices for land, materials, and labor. The line of argument runs as follows: the purpose of regulation is to approximate the price which would prevail under normal competition; this can best be done by valuing the property at the cost to reproduce, for the value of competitive industrial properties tends to approximate the cost of reproducing them. Utility rates based on reproduction cost would appear to be fairly closely aligned with changes in the general level of competitive prices. Furthermore, cost of reproduction would enable a utility to earn a return which varies as general prices vary; the purchasing power of the owner's income

is stabilized. The influence of argument of this kind led the courts to give dominant weight to reproduction cost during the 1920's; the commissions, perforce, had to follow suit.

The argument that cost of reproduction stabilizes the purchasing power of the income earned cannot be accepted. Logically it should call for a return to the investor that varies with the index of general prices rather than with changes in the cost of reproducing the property. But there is no necessary and close correlation between these two sets of prices. Moreover, holders of bonds and preferred shares, who supply well over 70 per cent of utility capital, and whose interest and dividends are fixed, do not share in an increased return in a period of rising prices. All the gain goes to common shares, many of which are owned by holding companies. In the event of a severe price decline, a revaluation of utility properties would endanger, if not destroy, the earnings and equity of the common stockholder. Thus reproduction cost would tend to make utility securities speculative, and probably would increase the required price of capital.

Finally, the current cost of reproducing existing property is not a proper standard for approximating competitive prices. The only appropriate cost of reproduction would be the cost of replacing the service by the most modern and economical plant and facilities using the most efficient methods of construction. But this concept does not appeal to utility systems which still place a value on facilities which are obsolescent and costly to operate. Practically, it would be next to impossible as a means of determining the "fair value" of a property, to apply the cost of a hypothetical new plant. Just what such a plant would cost would be subject to speculative imagination, controversy, and uncertainty. The threat to the financial stability of utility companies of any rapid advances in technology would also be very likely to increase risk and hence the costs of raising capital. The cost of the hypothetical new plant has not made much headway in actual practice, though an outspoken group of theorists strongly favor it.

Experience shows that cost of reproduction is not an easy, economical or workable basis for rate control. The task of inventorying and appraising the property of a modern utility enterprise is enormous and extremely costly to all. Furthermore, this tedious and costly process must be repeated every time a rate issue arises, and, as yet, no means of keeping the old valuation up to date by index numbers of price has been endorsed by the Supreme Court. Every element that enters the final appraisal figure is subject to guesswork and controversy. All sorts of extravagant claims are made for the inclusion in reproduction cost of allowances for good will, water rights,

appreciation of land, going value, and intangible values. There is no lack of opportunity for imaginative experts to pad values. To date such determinations of reproduction cost have resembled a mystic ceremony rather than a scientific procedure.

ORIGINAL COST AND PRUDENT INVESTMENT

Original cost means the cost of the property at the time that it was built, plus, of course, the cost if improvements and additions, less the retirements from time to time. As original records of many enterprises may have been lost or destroyed, or are not reliable, it is often necessary to revert to approximations and to attempt to determine what the property must have cost at the time it was built. This is difficult to estimate for the early years of utility operation, but can be determined with relative ease and accuracy for the period in which public regulation has been in effect. Usually such original cost is adjusted to arrive at the "prudent investment" by wiping out those expenditures which were made fraudulently or without ordinary business prudence.

Prudent investment as a method for determining rate base is supported by a majority of reputable economists and valuation experts. It is definite and objective, and, once fixed, it can be kept up to date by continuously recording the cost of property additions, as well as of retirements. A few progressive utility commissions now require utility companies to keep such records. Above all, however, the prudent investment basis of rate-making eliminates the hazards to the utility of changes in price levels; it pushes toward one goal of regulation, which is to wipe out the speculative aspects of utility finance. It is objected, however, that this stability also means that rate levels are made rigid and that they cannot be kept rigid in a world of ever-changing prices. It is said that capital will not flow into public utilities in times of rising prices when other industries beckon with larger returns; and that in times of depression, even if rates were maintained, capital would not be needed. And it is doubtful whether rates could be maintained in the face of declining volumes of business and popular demands for cuts in times of depression. Utilities would be denied that security of return for which they gave up the golden opportunities of boom years. But this obstacle is not insuperable; if price levels increase and utilities need a greater monetary return in order to attract new capital, they can be given a larger income. This can be done, within the limits set by what the traffic will bear, by adjusting the "fair rate of return," in whatever manner may seem to the commission to be desirable.

EFFECTS OF THE RULE OF FAIR VALUE

The argument over the relative merits of the different bases of valuation is to some extent academic. It is entirely conceivable that any basis for valuation could be made to work if skillfully and consistently applied. But the difficulty is that under the present law of the land no single, clear-cut criterion can be used. Most commissions originally favored prudent investment as the rate-base. But a series of decisions by the Supreme Court forced commissions to use "present value" as the rate-base. "Present value" of the property of a given company is determined by a hodgepodge of educated guesses, in which varying weights are given to the cost of reproducing the physical plant, and to original cost including appreciation in land value plus allowances for intangible values based upon established earning power. The courts insist that fair value cannot be determined by any formula but must be reached by a judgment in which due weight is given to all factors which may properly influence that fair value; but what "due weight" is, nobody knows.

The effects of the present-value rule have been twofold. First, in times of prosperity utility companies have been enabled to write up the book values of their properties as a means of maintaining rates at as high a level as possible. In this way electric-power companies have avoided reducing their rates in accordance with the notable economies continuously effected in the supplying of electricity.

The second effect of the present-value doctrine is to prevent commissions from determining rates accurately and economically. If a proposed rate range is contested by a company, a commission must make an extremely tedious and costly appraisal of the utility property, and it must analyze the company's past records and future prospects of earnings. If after this procedure the company still objects to the ruling of the commission, it may appeal to the courts for a review of the case, or the commission may seek judicial action to enforce its order. In the past, the effect of judicial review of rates has been to hamper and even to nullify the work of the administrative body. It is a general rule of law that courts will accept the findings of commissions as to the facts of a case, and will merely review the conclusions of the commission as to the law, i.e., as to whether the rate fixed is or is not confiscatory. But the distinction between questions of law and questions of fact is quite hazy. In practice, important rate cases are quickly appealed to the federal courts, which have shown no hesitancy in appoint-

ing a special master who proceeds to reopen the entire case, redetermine all facts, and rehear all evidence, both old and new.

The commission, fighting to defend its original order is at a great disadvantage in waging the long and exhausting legal battle which usually follows. The vagueness of "present value" helps to prolong the litigation. An important rate case may drag through the courts for several years. If, in the end, the courts uphold the commission, the valuation may be out-of-date and new litigation may arise. Under these conditions, the costs of rate regulation both to the commission (that is, the public) and to the company (which may even pass them on to consumers) are often enormous. And the cost, in terms of the frustration of effective rate regulation, is immeasurable.

Have the deficiencies of this procedure been exaggerated by its critics? The defenders of the valuation system show that most rate disputes are settled quickly by negotiation between the commissions and the utilities, or by formal proceedings before the commission. A review of rate orders of state commissions shows that rate cases are appealed only occasionally. But this proves too much. Commissions are willing to negotiate with companies because they want quick results and want to avoid the "ordeal by battle" of a formal valuation proceedings. Moreover, because of the fear of court reversals, commissions tend to allow rates that will not be contested by utilities.

The present-value rule might possess some virtue if it were consistently construed to reflect reproduction cost. In the years of depressed prices after 1929, a strict application of present value would have cut the rate-base of many utility properties down to original cost, or, in the case of properties built at high price levels, even far below original cost. Valuations undertaken during the depression are now said by utilities to be obsolete, owing to the great rise in price levels. Rate reductions have been made, to be sure, chiefly due to the threats of public ownership, to insistent public opinion which goaded commissions into greater activity, and to the realization of managers that lower rates might sometimes bring in more business, and hence check the decline (or even cause an increase) in revenues and in income.

RATE OF RETURN

After a fair valuation of a public-utility property is determined, the second step in setting the rate level is to determine a fair rate of return. Rarely is the rate of return fixed by law. In the absence of statutory defi-

nitions courts require commissions to determine the rate of return by the exercise of a "fair, enlightened, and independent judgment as to both law and facts." The guiding principles are that the rate of return should be high enough to attract the capital needed for extensions, that it should be about the same as the rate of return earned by other enterprises in the same region which have corresponding risks, that it should not be below the confiscatory level on the one hand nor lead to rates in excess of the value of the service on the other. Commissions may also consider the need of a reward for economy of operation and initiative in management, and the need for reserves for natural and economic contingencies.

It would seem that these principles should lead to considerable differences in the actual rates of return allowed for different companies. But in practice the rate of return has been determined casually and by custom, without any great regard for the real need of such returns. As a result, the rate of return had tended to be standardized. Before 1929, in New York State, electric utilities were commonly granted 8 per cent as a fair rate of return. Elsewhere rates of return on electric properties averaged 7.5 per cent and frequently were higher. Since 1930, commission allowances have been lower, centering between 5½ and 7 per cent.

Rates of return allowed have been far above the cost of most of the capital raised by electric-utility companies. In the 1920's, bonds were issued to yield 4.5 per cent to 5.5 per cent, while preferred stocks yielded from 5.5 per cent to 6 per cent. Since 1932, vast amounts of utility bonds have been refunded to yield 3 and 3.5 per cent. Bonded debt often forms one-half or more of a company's total capitalization, while preferred stocks may account for another quarter. The fact that rates of return allowed to utility companies have been, in general, much higher than rates paid by the companies on their bonds and preferred stocks means that the full amount of the difference has accrued to holders of common stock.[1]

As a result, common stockholders frequently have received returns much higher than are necessary to attract new capital. In this situation managers have every incentive to maximize the issuance of fixed-return securities, which can burden the utility heavily in case of diminished earnings. The speculative element in utility securities is enhanced. These conditions have led to suggestions that the rate of return should be differentiated

[1] To illustrate, assume a utility with a property valuation of $1,000,000, which is allowed a rate of return of 6 per cent, yielding a return of $60,000. Assume also a capital structure of $600,000 bonds yielding 4 per cent, and $400,000 of common stock. Bond interest will absorb $24,000 of the return, leaving $36,000, or an amount permitting a dividend payment of 9 per cent, for common stock.

according to the various classes of securities issued, in conformity with the necessary cost of obtaining such capital. Thus, for example, the New York Commission on Revision of the Public Service Commission Law recommended in 1930 that "for future investments the rate shall be fixed for bonds and preferred stocks at the market price received from the purchaser and that for common stocks the Public Service Commission and the companies shall agree upon a reasonable rate of return necessary to attract new capital . . ." But under the present law this scheme could hardly be applied to past investment and there seems to be little effort to develop it.

Finally, the standard rate of return has been criticized because it offers no incentive for a company to strive for greater efficiency, or to keep abreast of advances in technology. Commissions sometimes have been willing to reward special initiative in a clandestine fashion by not changing rates if a company reduces its costs of operation. If commissions always reduced rates so as to pass on to consumers the full saving in costs of operation, plainly utility managers—and the stockholders whom they represent—would gain nothing from their efforts. As a result, one criticism of the regulatory system is that it has not provided as much incentive for reductions of cost as it should. Recent experiments suggest that it may prove to be possible to avoid the inherent defects of regulated monopoly by a manipulation of the return. Thus it is possible to calculate the earnings received in excess of a stipulated minimum return as a result of rate and cost reductions, or of increased consumption, and divide these excess earnings between the company and its customers; the former would thus receive a larger profit, the latter, reductions in rates. This plan has been used in Washington, D. C., since 1924 and, with the aid of an alert commission, it has made an excellent showing.

OPERATING EXPENSES

In addition to a fair return, a utility company is entitled to recover its expenses of operation—i.e., outlays for labor, materials, coal, oil, salaries, rentals, fees, as well as taxes and an allowance for property depreciation. Such expenses range in the neighborhood of 70 per cent of total revenues. This means that accounts must be carefully prescribed and checked to prevent padding of expenses, or to prevent a company from entering construction costs as operating expenses and at the same time claiming them as an addition to the fixed assets, or to require adequate—but not excessive—charges for depreciation in order to maintain the security of the investment.

But owing to a general failure carefully to analyze the reported data, the operating expenses as reported by companies are usually accepted as reasonable. If, for example, a commission does strike out or reduce an operating expense item—such as excessive salaries to officials or fees to holding companies—it finds that the courts will not allow it to substitute its own judgment for that of the directors of the corporation. Expenses usually cannot be disallowed unless it can be proved that there has been fraud, or bad faith, or an abuse of discretion on the part of the management or the directors. The commissions often have found themselves virtually unable to prove that payments by operating companies to unregulated affiliates were excessive or unreasonable. Other expenditures are usually carefully watched by operators, who wish to widen the margin between expenses and revenues. Even so, very little has been done to ascertain standards of operating efficiency which may be used in passing judgment on the efficiency of operation.

FEDERAL REGULATION OF ELECTRIC POWER

State regulation of electric power was supplemented by the Federal Water Power Act of 1920, which created the Federal Power Commission and gave it licensing authority for water-power developments on public lands and navigable streams. Projects of this kind have been confined largely to the Western states, and to the present time the total power covered by such licenses is but a small portion of the entire power development in this country. Since its creation the Federal Power Commission has had authority over rates, service, accounts, and security issues of those of its licensees which did an intrastate business and were not regulated by a state agency, or which carried on interstate business. But even this limited power was not vigorously exercised during the 1920's by the three cabinet members who composed the commission. In the main, the commission was content to pass upon the merits of applications for licenses and to ascertain the amount spent in construction of licensed projects. In 1930 Congress established the commission upon a full-time basis. With the introduction of new members whose economic and political views were progressive, the commission became more active and alert in exercising its regulatory authority.

Prior to 1935 the electric utilities as a whole were not regulated by the federal government in any important respect; utility control was almost exclusively the province of the state commissions. But electric utilities were rapidly becoming interstate in character; technological change was jeopard-

zing the existing regulatory methods and was leading toward a re-drawing of regulatory powers.

Since about 1910 advances in large-scale generation and long-distance transmission of power have made it profitable to consolidate large segments of the electric power industry. Obsolete and uneconomical generating plants in small towns were abandoned and service was supplied through substations connected with large power stations. Costs of operation were materially reduced. The quality of service was much improved, and high-tension lines were extended to numerous communities hitherto without electricity. As generating and distributing techniques advanced, the area of integration grew wider so that it became common for single companies to serve scores of localities over a wide region. The next step was to interconnect power systems in order to interchange power and thus reduce investment and operation costs, as well as to minimize hazards of break-downs in plants and lines.

Interconnections crossed state lines. Power was generated in one state and consumed in another. The proportion of interstate power has been variously estimated by different authorities, but all agree that it rapidly increased each year during the 1920's. By 1933, the flow of energy across state lines was 18.5 per cent of the total electric energy generated.[1] For many individual states, the proportion was even greater. Since then, the interstate flow of power certainly has increased.

How far could state commissions go in regulating prices of interstate electricity? The courts held that commissions could regulate interstate service where the matter was of purely local importance, if they did not place a direct burden on interstate commerce and if Congress had not exercised its superior authority. The commissions therefore continued to control the retail price of electricity imported into their states, but they could not, in so doing, ascertain and control the costs of bringing such electricity into their respective states.

The crucial question was whether a state commission could fix the price at which electricity was purchased from an out-of-state company. Though many cases bear upon this complex question, the decision in the so-called Attleboro case in 1927 established conclusively that state commissions were powerless to regulate the wholesale price at which current could be sold by a company in one state to a company in another.[2]

[1] *Power Series* No. 1, Federal Power Commission, National Power Survey, 1935, pp. 46-48.

[2] *Public Service Commission of Rhode Island* vs. *The Attleboro Steam and Electric Company*, 273 U.S. 83.

HOLDING COMPANIES AND THE POWER INDUSTRY

The crowning defect of regulation by state commissions was that state authority was not commensurate with the vast web of holding companies that had been spun during the 1920's. Essentially, a holding company is one which through the ownership of voting stock is able to exercise some control—directly or indirectly—over the policies of subsidiary companies.[1] Such companies have been developed for a variety of reasons, chiefly to assist in financing, in combination, in control of construction and of management contracts. Once organized, such holding companies proved to be extremely profitable for those in control. Hence expansion continued, and in the 1920's there was a mad scramble to acquire both private and municipally owned properties.

By 1924, holding companies had come to control through operating subsidiaries about 63 per cent of the total energy generated by privately owned utilities; by 1929, they controlled 82 per cent. Combination among holding companies further concentrated control. Whereas in 1924, the seven largest holding companies controlled 42 per cent of all electricity generated, in 1929 three groups alone controlled 45 per cent.[2] These holding companies, however, varied widely in the types of systems which they had built up. Some operated solely within urban areas; others stayed within regional areas; the holdings of some were far-flung, comprising in some instances well-organized regional units as well as isolated holdings; still others had scattered holdings, most of them isolated and not interconnected. Holding companies also differ widely with respect to the economy and efficiency of management, their financial practices, and their attitudes toward the public. Thus any program of control must deal with a great diversity of conditions.

While the holding company is the embodiment of a speculative profit motive, it must be credited also with some advantages from the social viewpoint. Holding companies have served operating companies in many ways. In financing, funds have been advanced to operating units temporarily on

[1] In addition to ownership of voting stock, other devices and practices are extremely useful: management contracts, interlocking directorates, voting-trust agreements, control through proxies.

[2] *Summary Report on Utility Corporations*, Federal Trade Commission, 1935, Part 72A, pp. 36-38. After 1929, some of the larger systems (such as the Insull system) broke up. The amount of electric output controlled by the twelve largest systems declined from 76 per cent of the national total in 1929 to 50 per cent in 1935. *Power Series*, No. 2, Federal Power Commission, National Power Survey, 1935, p. 10.

simple open accounts or notes, or more permanently in exchange for operating-company stocks and bonds. These securities might be resold by the holding company or used as a basis for the issuance of its own securities. In either case, the operating companies have been said to benefit by obtaining capital more quickly and at a lower cost than if they were compelled to secure it without such aid. Investors may benefit from this process; holding-company securities represent a more diversified investment, with possibly less risk than those of scattered operating companies.

Major holding companies developed departments for construction, servicing, purchasing, and research.[1] Thus the best construction, newest facilities, and most efficient operating practices were made available to operating companies. Finally, the operating properties acquired often could be interconnected or actually merged in order to gain the great economies of large-scale production of electricity. Unquestionably, consumers have benefited considerably through the work of these organizations in the way of better service. Consumers have benefited also to the extent that such savings from financing, service, and integration have been passed on to them by forward-looking managements or by virtue of the regulatory process.

PROBLEMS RAISED BY HOLDING COMPANIES

While holding companies contain the possibilities of benefit for investors and consumers, the question is properly whether these possibilities have been fully realized, and whether they have not been more than counterbalanced by the evils of holding companies. Of these evils there have been several.[2] The fees charged to subsidiaries for construction and management services often have been exorbitant, in view of the necessary costs of supplying the service. The temptation to charge for unnecessary "gilt-edged" services has not always been resisted. Such fees have entered the costs of the operating companies, and these costs are recovered from consumers in the rates they pay. These charges often have been a way of siphoning profits out of the electric service, over and above a fair return on investment.

Another evil has been the practice of improperly "writing up" the book

[1] Such departments are sometimes organized collectively or individually as separate subsidiary companies.

[2] The evidence substantiating the following points is marshaled in the *Summary Report* of the Federal Trade Commission (*Report on Utility Corporations*, Vols. 72A and 73A).

value of the assets of the holding companies and their subsidiaries.[1] It often is said that increases of asset values through manipulation cannot affect customers whose rates are determined by the rule of fair return on fair value of actual property serving them. None the less, there can be little question that such financial overloading does ultimately affect rates, service, and stability of investment.

Another practice, similar in origin and intent to write-ups, is the manipulation of accounts in intercompany transactions so as to create paper profits or to hide real profits from regulatory agencies. Shares, service, and property may be transferred from one company to another at artificial prices which are not determined by arm's-length bargaining; the "original cost" of a property to the acquiring utility may thus be artificially enhanced for rate-making purposes. In such transfers holding companies usually are the beneficiaries. Finally, consumers have not benefited from integration of operating companies to as great an extent as possible. The competition for operating properties led to many acquisitions without reference to economic or engineering considerations; many system maps disclosed a crazy-quilt distribution of properties.

THE PUBLIC UTILITY ACT OF 1935

The need for regulation of holding companies was emphasized and given support by the coming of the depression. Operating-company incomes stopped growing and declined; holding-company incomes melted away, in some cases, so rapidly that failures ensued.[2] Investors' losses mounted as holding-company stocks fell to new lows and dividends disappeared. The combined forces making for reform could not be stopped, despite tremendous influence brought to bear on Congress by the utility interests. Out of a series of proposals and counterproposals Congress finally passed the Public Utility Act of 1935.

No brief summary can do justice to the extreme care and great skill shown in the draftsmanship of the law itself, which covers almost seventy closely printed pages. The act consists of two distinct parts. Title I, called "The Public Utility Holding Company Act of 1935," deals with the much

[1] A "write-up" is an upward revision of the book value of property or other assets. The extent of write-ups depends upon how much the management (rather than the accountant) estimates the capitalized value of prospective earnings to be, as well as upon the amount of securities which the public can be persuaded to buy.

[2] The most notable was the Insull crash early in the depression. More recently (1940) the huge Associated Gas and Electric System went into receivership.

publicized control and eradication of holding companies. Title II, "The Federal Power Act," regulates the interstate power systems. Each of these will be described in turn.

Title I: The Holding Company Act. The act vests the Securities and Exchange Commission with power over interstate holding companies (both gas and electric) and their subsidiaries and affiliates. The law defines a "holding company" as a company that controls 10 per cent or more of the voting securities of a utility company or actually controls it with even a smaller ownership. Such companies are required to register with the SEC in order to identify themselves.

Several sections of the law are aimed at the elimination and prevention of those evils of holding companies that have been found to be contrary to the interests of investors, consumers, and the public generally. In the first place, the SEC is to control the issuance of new securities by holding companies. A proposed issue may not be sold unless the SEC finds that it is of a type suitable for the capital structure of a holding company. The issue must also bear a sound relationship to the earning power of the issuer, and in general must be satisfactory from the point of view of the company, the investor, and the consumer.

In the second place, holding or subsidiary companies may not acquire the assets or securities of other companies, or any other interests in them, without the approval of the SEC. Acquisitions cannot be authorized if they unduly complicate utility systems or interfere with simplification of structures. The SEC has broad powers over intercorporate property transactions, so as to prevent property "write-ups" or other financial manipulations.

Finally, reports and accounts are subject to control. Speculation in securities of the companies by their officers and directors must be reported, and any short-term profits must be turned over to the company. Interlocking controls between holding companies and banking or brokerage interests are prohibited. An attempt is made to neutralize the political influence of holding companies by prohibiting political contributions, and by requiring the registration of lobbyists.

The law moves to simplify capital and corporate structures of holding companies, and to promote the integration of their properties. The SEC must take steps to insure that "the corporate structure or continued existence of any company in the holding-company system does not unduly or unnecessarily complicate the structure or unfairly or inequitably distribute voting power among security holders of such holding-company system."

The so-called death sentence in the law is intended to limit the operations of each registered holding-company system to *a single integrated*

public utility system, whose utility assets "are physically interconnected or capable of physical interconnection" and are confined to a single area or region (in one or more states). The SEC is instructed to issue orders to effectuate this policy. The commission may allow exceptions to the rule of a single integrated system where its rigid enforcement would cause unnecessary hardships or would not effect any economies, or when all the additional systems are located in one state or in adjoining states. In any case, pyramiding is limited to the second degree, i.e., only one holding-company layer can intervene between a top holding company and an operating company.

Title II: The Federal Power Act. The Federal Power Commission is given broad authority in all those matters concerning interstate transmission which have been beyond the control of state commissions. Interstate power companies cannot issue securities unless the FPC finds that their sale is reasonably necessary for some lawful purpose. All rates and charges for interstate energy shall be just and reasonable, and if they are not, the FPC may fix rates for the future. The FPC may help the state commissions in rate regulation by determining the costs of production and transmission by power companies subject to its jurisdiction where it does not have authority to fix a rate.

The FPC is directed to divide the country into regional districts for the *voluntary* interconnection and co-ordination of power facilities. It is the duty of the commission to encourage interconnection within and between the districts. But it can issue mandatory orders for interconnection only when hearings made upon the request of a state commission or a utility operator show that the action is in the public interest. In case of war or other national emergency, the FPC may summarily order whatever temporary service arrangements may be required by the public interest.

Accounts and reports of regulated companies are subject to plenary control by the FPC. Furthermore, the FPC is given a broad charter for making investigations and reports upon all aspects of the power industry, and is especially directed to draw up a program of national power needs based upon present and future power sources and requirements.

PROBLEMS IN FEDERAL POWER REGULATION

The passage of the Public Utility Act of 1935 marked the beginning of an attempt to solve a set of difficult problems. The outcome of the administration of the law, particularly that part of it relating to holding companies, will not be known until it has been in force for a number of years.

The registration requirement and the "death sentence" have both been upheld by the Supreme Court, but many details of corporate reorganization have still to be worked out.[1]

Legal, economic, and political forces will affect the determinations by the SEC and FPC of the lines of policy they will follow. The federal commissions, especially the SEC, will face many difficult problems, as the standards set up by the law are necessarily general. Practical meaning must be given to many vague terms. Thus far the SEC has been feeling its way, especially in applying the "death sentence."

Though several utility systems had taken steps to conform with the integration provisions of the law, the main drive to enforce the law was begun in 1940. While its policy even yet is not fully crystallized, the SEC now interprets "single integrated system" to refer to a compact system. Thus it does not allow widely separated territories to be included in a "single system" even if they are physically interconnected. It thereby discourages the uneconomical construction of transmission lines. It seems likely that such far-flung electric empires as the Electric Bond and Share system will be dismembered; in comparison systems which are concentrated in one region, such as the Niagara Hudson Corporation (in New York State) or the Consolidated Edison Company (in New York City), will be little affected by restriction to a single regional system.

Some knotty problems are raised in the regulation of security issues. Obviously, earnings, present and future, rest upon the rates charged. Yet the SEC has not disapproved security issues on the ground that existing rates are unreasonably high; if it did so it would in effect be compelled to ascertain what the rates should be as against what they are. Yet, if state commissions reduce rates, the security issues approved by the SEC may be left high and dry. Pressure to keep rates up to protect such earnings might occur. At bottom the problem arises because there is a separation of authority as to rates and security issues. Yet, to the present time, the SEC has had good reason for approving most of the issues that have come before it; they have consisted principally of refunding issues, intended to reduce interest charges.

On the whole, while the "death sentence" proceedings have been in abeyance, important changes in the organization and practices of holding

[1] *Electric Bond and Share Co.* vs. *Securities and Exchange Commission*, 303 U.S. 419 (1938); *North American Co.* vs. *Securities and Exchange Commission*, 327 U.S. 686 (1946). Prior to the latter decision most holding companies went on a "sit-down" strike and refused to register, or to submit reorganization programs. This helped delay the enforcement of the law.

ıpanies have been effected bit by bit, by the SEC. Thus in its control ecurity issues, it has tried to require sound standards of finance and manent. It has endeavored to foster the equitable distribution of voting er, to reduce underwriting spreads, to introduce competition in the keting of securities, to air thoroughly all plans for financial organiza-

Control of service companies and contracts has been pushed so as to e available standardized and complete information on costs. Holding panies themselves have been required to adhere to a standard system ccounts prescribed by the SEC. In doing these things, however, the cannot repair all the damages caused by unsound corporate financing promotion in the past. Investors cannot expect reparation for losses; such losses cannot be laid at the door of the SEC. But if regulation ccessful, future investors will be protected from the abuses of the past.

In conclusion it may be observed that public regulation of monopolies become by this time a unique combination of achievement, experiation, and political tentativeness, with a host of imponderables clusterbout each of these conditions. Among achievements, the first and est may be the recognition that some industries are "natural monopo- that these industries are "affected with a public interest," and so are ct to regulation by the state. Other achievements consist of what has learned through the ceaseless experimentation—much of which may accurately be called trial and error—in how to secure for the public lvantages of monopoly without its disadvantages. Political tentativeness ls backward into the past—where it is reflected in unstable, often un-n, public policies—and forward into the future. Political tentativeness e future may be summed up in three general questions: (1) Will policy be able to protect the public against the harmful use of poly power and, at the same time, maintain the conditions under which e enterprise in the regulated industries will grow to meet the expandeds of the public? (2) To what extent may regulation in the public t be extended to fields of industry to which it does not now apply? o what extent may such regulation give way to public ownership and on?

SECTION FIVE

CONFLICT AND CO-OPERATION AMONG ECONOMIC GROUPS

14 Labor: markets and control

15 Industrial conflict: employers, unions, and the public

16 Farmers: production and prices

17 Consumers: protection and co-operation

18 The insecure and handicapped: social security and public relief

TION FIVE

CONFLICT AND CO-OPERATION AMONG ECONOMIC GROUPS

!ODUCTION

People lend themselves to highly complicated schemes of classification. person has measurable physical attributes which may be classified by opologists, geneticists, and physiologists. Each person also may be put a variety of categories because of the interests he has in common with people. Thus a particular man may be a husband, a father, a skilled anic, a Presbyterian, a Mason, a Democrat, and a member of a choral y, a bowling club, an automobile association, and a labor union. He nay have tastes and hobbies that are peculiarly his own. But his major sts and most serious problems, as a member of society, are those that s in common with other people.

Every individual participates—as worker, manager, capitalist, consumer two or more of these ways—in the activities that collectively make up onomy. It follows that every individual is materially affected by the ion of the economy and by his own position in it. The way a person his living and the kind of living he makes obviously are of the greatest tance to him and his family. From a technical point of view, economic ms concern the use of productive resources and the consequences, in rm of prices and incomes, that follow from their use. But from a personal point of view, the problems of the American economy are n of the problems of all the people who participate in it.

o attempt to study economic problems from the personal point of would, however, be of little use. In the first place, personal problems some degree subjective, and little could be learned about them by ethods of economic synthesis or analysis. In the

interest in any person's relation to the economy at large is a double one: we are concerned both with what the economy does for him and with what he does for the economy. These purposes can be served better by studying the interests and activities of particular economic groups than by studying those of separate individuals.

The groups studied in this section—wage earners, farmers, consumers, and the poor—appear to be the most important for our present purposes, because they embrace large numbers of people (the category "consumers," of course, includes everyone) having interests in common; furthermore, the problems pertaining to each of these groups ramify throughout, and are coextensive with, our entire economy. The only other group of comparable importance, suppliers of capital and credit, are studied in other chapters.

APTER FOURTEEN

Labor: markets and control

The American economy has undergone many changes during its his- One great change has had far-reaching effects upon the character of abor market. According to the first census, taken in 1790, the over- ning majority of Americans were independent, self-employed pro- s. Most of them were occupied in agriculture. One hundred and fifty later, when the census of 1940 came to be taken, less than one-fourth Americans were engaged in agriculture, and only a small proportion self-employed in other occupations. More than three out of every four ns who work for a living now do so by selling their time, energy, and o some employer. It was shown in Chapter 8 that wages and salaries nt for about two-thirds of our national income.

mployer-employee relations have come to rank next in importance to relationships. When people work for themselves and sell the product ir own labor, there are, strictly speaking, no "labor problems." But they serve others for money, conflicts of interests arise between rs who sell labor on the one side, and employers who buy labor on her. The conditions under which labor is employed in a competitive leave considerable room for discontent because of the natural desire concerned to secure the largest possible share of the national income.

ITS SALE IN THE MARKET MAKE LABOR A COMMODITY?

very day millions of people sell their labor to other people. Like other labor is sold for a price. This price is called the worker's wage or but it is nevertheless a price, since it is the employer's payment for of the worker's services. What that price is, usually depends on con- of supply and demand in a given place at a particular time. Durin-

World War II manufacturers of machine tools needed the services of many more pattern- and die-makers than were available, with the result that people having these skills received relatively high prices for their labor. Yet a few years earlier (in 1932, for example) the supply exceeded the needs of employers, so that wages were quite low and many pattern- and die-makers were unemployed.

But, as in all markets, supply and demand not only determine the prices of labor; they are in turn decisively influenced by these prices. At a wage of ninety cents an hour in a certain community, two hundred men may be willing to work as ditchdiggers. Should wages be raised to two dollars an hour, however, the number of people desiring to have such employment would probably increase greatly—perhaps to several thousand, since digging ditches would become more attractive than many alternative occupations paying less than two dollars an hour. Employers, too, are affected by wage changes. At ninety cents an hour, they may find it profitable to employ one thousand workers, but at two dollars an hour they may be willing to hire only three hundred. A little reflection makes clear that these characteristics of supply and demand in the market for labor are similar to those of any ordinary commodity sold in its own market. It is these and other similarities which sometimes justify the discussion of labor as if it were a commodity no different from automobiles or hats.

INADEQUACIES OF THE COMMODITY CONCEPT

But there are also important differences between labor and ordinary commodities. These must not be neglected, for they seriously affect the market for labor. Most of the differences arise from the fact that human labor is inextricably bound up with the person who produces it.

In the first place, labor is highly perishable. Human beings can work for only a limited time, and past time can never be recalled. Hence the service of labor must be used as time passes or it is wasted forever. It follows that when a worker is unemployed, his energies for productive activity cannot be stored for future use, as can many commodities. The heavy unemployment of the 1930's resulted in an incalculable loss to the community in terms of energy and ability irretrievably wasted.

A second difference inheres in the fact that human beings who produce labor services have independent wills and inner drives of their own. The possessor of an automobile can abuse and mistreat his car without fear of revolt. A worker usually cannot be treated in this way. In fact, the employer seeking to deal fairly with his employees finds his task made difficult

he individual desires and peculiar habits of those he employs. In the
of his services, the laborer frequently has an idea of a "fair wage" which
elieves that he needs in order to live decently. He seeks this without
:d to the supply and demand situation, and is discontented if he does
get it. The human worker, in short, introduces a degree of rebellion
irrationality—at least potentially—which vastly complicates the buyer-
· relationship in the labor market as contrasted with the relations be-
n the men who buy and sell shoes or radios. Almost all modern social
ation dealing with labor conditions is based on this noncommodity
:t of labor.

THEORY OF THE FREE LABOR MARKET

The function of the labor market is to bring together buyers and sellers
)or services. Once brought together, however, the parties must enter
n agreement governing the use which the buyers can make of the sell-
nergies and abilities. The principal condition to be agreed upon is the
which the employer is to pay the worker. In return the latter agrees
rform certain duties, usually for a fixed period of time. Theoretically,
orker agrees to work when he pleases, where he pleases, and for whom
:ases. This follows from the principle that he is free to seek his own
nterests. In theory also, he competes against all other workers who are
rly striving to make the best bargains they can. Each employer is, at
me time, seeking to obtain the services of labor at such prices and in
quantities as will maximize his profits. The theory of the free labor
t also holds that all employers are competing against each other, and
his competition between employers on one side and workers on the
determines the wages paid for each kind of labor service. All em-
's willing to pay those wages for some amount of labor services will
the workers they require, and all workers with the needed qualifica-
vho are willing to accept those wages will be employed.

n ancient and traditional guiding principle of our legal system is that
: contract, which, in this connection, simply recognizes the right of
lual employers and workers to reach agreements unhampered by out-
)rces. The principle assumes that the force of competition on the
narket results in the best bargain possible under the existing circum-
; any interference, therefore, would work out to the detriment of
/orker and employer, and also to that of the community. If we re-
:r that this reasoning assumes equality of bargaining power on the two

sides, and the presence of alternative choices of both employment opportunities and of labor supply, the conclusion will not seem unreasonable.

It is out of these concepts of self-responsibility, self-interest, and free contract, together with the underlying axioms of competition, that the theory of the free labor market is constructed. They are basic concepts of the laissez-faire, or individualistic economy. For a correct understanding of the American labor situation, however, we need to examine the conditions that actually exist and note the extent to which they conform to, or diverge from, the ideal free labor market. It probably is obvious to the reader that many of the realities are quite different from the ideal. But it will help us to comprehend the actual situation under which labor services are bought and sold today if we use the foregoing generalized account as a norm from which to measure divergences. Moreover, much of the legal, economic, and political thinking of the past century and a half has proceeded from the premises stated above.

THE CONTEMPORARY LABOR FORCE

Let us now examine the labor market as it exists and operates today. The composition of the labor force, and the historical changes that have occurred in it, were described in Chapter 3.[1] According to the census of 1940, there were more than fifty million Americans in the nation's labor force during the week of March 23-30, 1940.[2] This means that about two out of every five Americans either were working during that week or were looking for employment. The others were either too young or too old to work, were in school, were housewives, were unable to work because of illness or other physical handicap, or were unemployable on some other ground. It should be noted that the census reported the labor force as of a particular week.

The labor force referred to above was not composed exclusively of wage earners. It included millions of farmers, businessmen, and professional people who work for themselves. Most of these men and women do not regard themselves as constituting any part of the supply of labor; many in fact are themselves employers. Yet they are workers, and, at least potentially, many of them are a part of the supply of wage labor. If industrial employment increased sufficiently, many not-very-successful farmers and shop-

[1] The occupational composition of the labor force is shown in Fig. 1, page 72.

[2] As this is written, more than sixty million Americans are gainfully employed. The latest census figures are used here because they are classified according to occupation and also because they are comparable with those of other census years.

pers would find it advantageous to leave their present occupations and
: jobs working for others.

But even after allowing for a large amount of self-employment, it is
r that the overwhelming majority of the American labor force, approxi-
ely thirty-five million people in 1940, work for others in some capacity.
s includes such diverse groups as fruit pickers in California, salesgirls in
v York City department stores, government clerks in Washington, steel-
:kers in Pittsburgh, and others engaged in a great variety of occupations.

The census groups wage earners into four large classes: (1) clerks and
lred workers, (2) skilled workers and foremen, (3) semiskilled workers,
(4) unskilled workers. The first group, which includes mainly "white-
ar" workers, has grown steadily in numbers and importance. The mem-
; of the other three classes are usually considered manual workers, al-
ıgh many of them have jobs requiring a high degree of alertness, initia-
, and intelligence. Between 1910 and 1940, the importance and number
killed workers and foremen increased both absolutely and proportion-
. Even greater increases occurred in the semiskilled worker group. At
bottom of the scale, however, the number of unskilled employees showed
arked proportional drop and even an absolute decrease in numbers dur-
this period. The explanation of this last trend probably lies in the fact
: machines are continually being developed to do simple, routine jobs
:he type performed by unskilled workers. Although unskilled workers
constitute the largest single group within the labor force, it is prob-
: that their number will continue to decrease.

CHANGING OUTLOOK OF WAGE EARNERS

A transformation is also taking place in the habits of thought of many
erican wage earners. The existence of a large, permanent wage-earning
ıp is a relatively recent fact. Throughout most of our history, the status
vage earners has been regarded as a temporary one, to be discarded as
ı as one had saved enough money to buy a farm of his own or to estab-
an independent business. "In America a worker is a capitalist without
ıey," the proverb ran, and throughout the nineteenth century many
:kers struggled to free themselves from the wage-earner status and gain
ıomic independence, often with success.

But with the disappearance of the frontier, the opportunity to become
rmer on free land was brought to an end; similarly the growth of large
unes and the ever-increasing dominance of large corporations have made
tively fewer opportunities for independent economic success. Millions

today are resigned to permanent employment by others. Much work is of a kind that leads to little, if any, advancement. When it is impossible or very difficult for a man to rise above his original circumstances, we say that there is class stratification; such stratification is particularly rigid when membership in a particular economic class is customarily passed on from parents to children. Stratification has existed for many years in parts of Europe, where it has contributed to the rise of Communism and other radical movements. American class lines are by no means hard and fast today, especially in the sense that children have abundant opportunities to escape from the economic stratum occupied by their parents. But they are, for each individual, less fluid and passable than they were in the time of the frontier and the heyday of small business.

THE STRUCTURE OF LABOR MARKETS

The theoretical "free labor market" was sketched earlier in this chapter. The actual labor market has many "imperfections," some of which account for the growth of government intervention and regulation. Some of the imperfections are easily discernible. An hour of a particular kind of labor, unlike many commodities, is not a homogeneous standardized unit. In a perfect market there is but one price for a given article at any one time; yet, in mills and factories, wages for the same work often vary materially for such reasons as sex, race, and seniority, as well as for reasons of different qualities of workmanship. Again, under conditions of "pure" competition, the number of both buyers and sellers of labor would be sufficiently large that no single buyer or seller could exert a significant influence on the market price. But actually, the number of buyers of labor services has been steadily shrinking in relation to the number of wage earners. Increasingly, large-scale employers have a great influence on the market. Contrary to the assumption of the theory of pure competition, individual workers, as sellers of labor, are usually very poorly informed of market conditions and opportunities. Employers typically are much better equipped with relevant information, but keep it confidential. And last but not least, there is not supposed to be—in a perfect market—any collusion among the buyers or sellers. But Adam Smith, as long ago as the eighteenth century, entertained no illusions about the actual state of affairs. In a famous passage he wrote: "We rarely hear, it has been said, of the combinations of masters, though frequently of those of workmen, but whoever imagines, upon this account, that masters rarely combine, is as ignorant of the world as of the subject. Masters are always and everywhere in a sort of tacit, but constant and uniform combination,

to raise the wages of labor above their actual [i.e., going] rate." And of ırse all labor unions represent an attempt at combination on the part of ers of labor services; to the extent that their efforts are successful, the ıditions affecting the market supply of labor services also fail to accord h "pure" competition.

Thus far, our examination has been concerned with the labor market. d, of course, there is no *one* labor market. An employer never tries to e "labor"; he wants a carpenter or a stenographer or some other par- ılar kind of worker. If he needs a mechanic, a typist will not do, no mat- how skilled. It must be recognized that there are different labor markets different types of workers. Only for the lowest paid, most unskilled rk will *any* worker do; for most jobs special training and experience are ded.

OGRAPHIC AND OCCUPATIONAL IMMOBILITY OF LABOR

Each labor market has its own geographical area. If an electrician in ttle needs a job, it usually does him little good if there is an employer Dallas who needs such a worker. Hence we must consider the space area a labor market as well as the type of labor services bought and sold in it. ce the United States is a large country in which there are many different ds of workers, there is necessarily a large number of individual labor rkets, in each of which there are special conditions of supply and de- nd. This is illustrated by the fact that in the early stages of our war ort airplane factories in Los Angeles found they could not get skilled chanics even though there were a large number of unemployed persons hat city. At the same time, qualified mechanics were walking the streets Detroit eager for jobs, but unable to get any.

In the past, most labor markets have been rather narrow. First, a rker who has one kind of skill and experience cannot easily acquire the ning and skill needed for another kind of job. This is true even if the nand for his abilities is low and he is unemployed, while the demand for econd type of labor is great and the supply is insufficient. We express s by saying that the worker is *functionally* or *occupationally immobile:* cannot change easily from one type of job to another. Second, most rkers are reluctant to leave their home surroundings even if they are un- ployed and know of a job at a distant point. Heavy money costs are in- ved in shifting one's family and household belongings from one part of country to another. For these and other reasons, workers have usually en *geographically immobile*. From the employer's point of view, it often

is more convenient to hire labor from a neighboring area. This is quicker and much less expensive than attempts to get workers from a distance. Finally, labor-market information usually does not extend beyond a narrow area, so that employers and workers in one place may know relatively little about the situation in the corresponding labor market (i.e., the market for the same kind of skill) in another place.

DEMAND AND SUPPLY IN MARKETS FOR LABOR

Although there are private employers all over the country who employ workers in numbers ranging from one to half a million, there is considerable geographical concentration of demand. In 1933, for instance, some two hundred highly industrial counties, out of the total of more than three thousand counties in the United States, contained about 75 per cent of all the manufacturing jobs in the country. Most of these were in the New England, Middle Atlantic, and East North Central states. Construction, trade, and professional services have similar—although less intensive—concentration, while even with regard to farm labor there are a few areas, such as California and Florida, in which employment is heavily concentrated.

The concentration of demand for labor in a relatively small number of firms also is extremely significant. In 1937, fewer than 3 per cent of the nation's private employers, each employing more than one hundred workers, hired 62 per cent of the nation's wage earners. Preliminary figures issued by the Social Security Board for the postwar year 1945, cited in Chapter 11, indicate that the two hundred largest employers of labor (about one ten-thousandth of the total number of reporting firms) employed more than 20 per cent of all workers covered by the Social Security Act. This concentration is extreme in many local markets. In some localities the demand comes from only one employer. In others, there are very few employers, and these frequently have noncompeting labor needs. Some of the textile towns in the South, and various Pennsylvania, Kentucky, and West Virginia mining areas are extreme examples of such local concentration of demand. In such situations there may be little or no competition between employers of labor, and the individual worker may have no alternative but to work on whatever conditions are offered if he is to remain in the community. The situation is reversed, of course, when the demand for labor is brisk and the supply insufficient, for then competition among employers can be very active. Then workers may even receive inducements to leave jobs they already have and go to new ones. Such "labor piracy" was common during both World Wars.

In the absence of collective bargaining, the supply of labor consists of ny separate individuals each offering his services to the highest bidder, ject to advantages and limitations of skill, geographical location, the law, l other factors. Under these conditions competition is likely to be more ive on the supply side than on the demand side of the market, so that the ividual worker, bargaining alone, is in a precarious position. Competition ıtense because the worker's scheme of life centers about his job, the main rce of income for himself and his family.

NCTIONS OF LABOR MARKETS

Each labor market should operate so that: (1) every employer who ds labor services of a certain type can get them quickly; (2) every quali- l worker who wants a job can get one quickly; and (3) wages and other ıditions of employment will be acceptable to all who give, and all who ept, jobs. Two functions of a market are involved here: bringing work- and employers together and determining the wages and other conditions ler which the work is performed.

How do employers and workers get together? Actually, they get to- her in so many ways that it would be impossible to catalogue them ex- ıstively. We can, however, enumerate a few of the most important. One thod is through personal acquaintanceship. When a vacancy occurs, the ployer may put up a notice, or may ask some of the workers whether y know anyone who can fill the position. Sometimes the employer, or an cer of the employing company, knows someone who is available. From standpoint of getting a job (in contrast to getting a worker) a variation the latter method is sometimes referred to as "having pull." These once re, and perhaps still are, by far the commonest methods used in filling s.

Today such practices are frequently condemned as unscientific and in- cient, and as being the all-too-common cause of square pegs in round es. Increasing care is being taken by employers in selecting workers. As methods of making original contacts with applicants for jobs, more and re employers use public or private employment agencies, or advertise in press. Private employment agencies, which usually charge substantial fees their services, annually place many thousands of workers in jobs. Public horities regulate and license such agencies in order to avoid abuse and ıd. Employment offices operated by unions, employers, and benevolent anizations also help to bring employers and workers together.

Many maladjustments in labor markets are the result of incomplete information about the supply of workers and the demand for their services. This was clear during World War I, when the government had to establish public employment offices managed by the United States Employment Service in order to shift labor to essential war industries where its supply was insufficient. This work resulted in marked improvement in market information. After the war, however, Congress turned these offices over to state and local governments. This decentralized administration prevented national distribution of labor-market information and, to that extent, proved inefficient. As a corrective to this condition, the Wagner-Peyser Act of 1933 provided for federal and state co-operation in maintaining a system of employment offices that would furnish free service both to workers and to employers. Before 1940 these offices were not very important, apparently because employers were reluctant to use their facilities. With the appearance of a serious labor shortage during World War II, however, the United States Employment Service once again assumed an important role in helping to shift workers to where they were most needed. In fact, its work was considered so successful that President Truman refused to return the network of employment offices to the states at the end of the war. In accordance with a law passed by Congress the following summer, however, 1,800 local offices of the USES were restored to state supervision at the end of 1946.

WAGE RATES AND LABOR EARNINGS

Once hired, a worker is usually paid according either to the amount of time he works or to the amount of output he produces. That is, he may be paid at a rate of so much per hour, per day, or per week, or he may receive "piece rates" according to the volume of his output. A carpenter may be paid a wage of $2 an hour; the piece rate of a presser in a clothing factory may be twenty cents for each suit pressed. Sometimes both time and piece rates are combined in order to offer workers an incentive for increased output. Thus a salesman may receive a regular salary of $50 a week plus a commission of $5 for each $100 of sales above a specified amount. Which method of payment is adopted depends in part upon the particular circumstances of a job. The relative bargaining strength of workers and employers may also play an important role in determining the scheme used. Recent legislation providing for minimum hourly wages has tended to encourage payment of time wages, since, under a piece-rate system, it is not always easy to prove that an equivalent of the minimum time-wage is being paid.

But the worker is not interested only in his wage rate per hour, or per unit of output. He is interested as well in his total earnings over a period of time. The carpenter referred to above might work but ten hours a week and thus earn a mere $20. Another carpenter paid only $1.50 an hour might work twenty hours a week and thus make $30. If we consider only the value of a week's salary and neglect the greater leisure of the first carpenter, the second carpenter is better off even though his hourly wage is less. But there are other factors involved which sometimes make the first carpenter unwilling to reduce his hourly wage, even though he might earn more money per week by doing so. Similarly the total earnings of the piece worker depend upon the number of units he produces each week as well as upon the price per unit.

Thus far our discussion has been conducted in money terms, with no attention to the value of money. It is obvious that a worker receiving, say, $25 a week can buy more in a period of low prices like 1932 than he can in a period of high prices like 1948. Hence we must distinguish the amount of goods and services that the worker can buy with his wages or earnings (as shown in Chapter 8, these are called his *real* wages or earnings) from the money wages he receives. Many workers have not recognized this distinction. They have rebelled only when their money wages were cut, remaining quiescent while prices rose with a resulting decline in the amount of goods and services they could buy with the proceeds of a unit of work. In recent years, however, workers have been made increasingly conscious of the importance of real wages and real income. This was one (but only one) of the reasons for the wave of strikes in early 1941 and again in 1946; workers pointed to the rising cost of living and demanded sufficient increases in their pay to prevent their real incomes from declining. As we saw in Chapter 8, since 1939 aggregate wages and salaries have increased far more rapidly in money than in purchasing power.

A useful statistical concept for the study of labor income is that of average weekly or hourly earnings. This enables us to study and compare the money incomes of various kinds of both time and piece workers and to take account, also, of the average amount of work done. Average wages and earnings always have been relatively higher in the United States than in other nations. During the early periods of our history, this was due principally to a scarcity of workers in relation to other resources; more recently, rapid technological advance has been important. The statistical data for any time before 1890 are scanty and inaccurate but they provide fair evidence of a generally rising trend of earnings.

From time to time the rise in earnings has been interrupted. Earnings have usually been very sensitive to cyclical fluctuations. Leo Wolman's extensive studies indicate that, over most business cycles, average hourly earnings have lagged behind the fluctuations in general business and industrial activity. The sluggish response of the earnings of labor—or, from the employer's point of view, of labor costs—intensifies the cyclical fluctuations that recur in our economy. During the downturn from prosperity, continued high labor costs may cause serious losses to business concerns whose products are selling less abundantly and for lower prices, thus further accelerating the downward movement.[1] At the upturn from a depression, however, the lag of labor costs behind rising prices and volumes of output may permit greater profits to be made, thus aiding the recovery movement. The bearing of these lags on cyclical movements is still a matter of controversy, though it cannot be doubted that movements of wages and earnings play an important role in the market ups and downs of our economy.

This lag of earnings behind prices means that in time of recession the worker who remains fully employed may actually benefit because he receives a greater real income, even though his money income is somewhat reduced. The burden of the downturn in business is felt by the worker who loses part or all of his employment, and consequently part or all of his earnings. The continuance of this lag is further evidence that labor-market situations are not as perfectly competitive as was assumed in our ideal market. If they were, the presence of unemployed workers competing for jobs would tend to drive down the money wages and earnings of employed workers. Obviously, also, the fully employed workers' real incomes are reduced in the upswing if their earnings do not rise as rapidly as the prices of things they buy.

FACTORS IN WAGE DETERMINATION

Bargaining between employers and workers, or between associations of employers and labor unions, is a complex business. An employer will not willingly pay a man more than he is worth (although this may sometimes be difficult to determine) since to do so would be unprofitable. The lowest amount the worker will accept is somewhat more elastic, depending

[1] It is probable that, for most employers, *labor costs* decline somewhat more rapidly than *wage rates* during a recession. This occurs partly because overtime pay is reduced or eliminated, partly because the least efficient workers are the first to be laid off, and partly because some workers may work more diligently in order to insure holding their jobs.

upon his possible alternative sources of income, the amount of his savings or other resources, the length of time he has been out of a job, the urgency of his need. When bargaining is collective, considerations of this sort still apply. The negotiators on each side represent their constituents, and they know that the agreement, once reached, has to be ratified by individual employers and labor union members.

The value of a worker's services to an employer depends upon the worker's productivity, and this in turn hinges upon his skill and efficiency and the quality of the equipment with which he works. One reason for the relatively high wages of American workers lies in the excellent machinery with which they have worked and the efficient manner in which production has been organized. Skill by itself, it should be noted, is not a sufficient reason for a worker to gain a high wage, or even to be employed at all. The glass blowers of a few decades ago were certainly very skilled, but their services became worth little when bottle manufacturers switched to efficient machines turning out bottles at a low cost.

The lowest wage or earnings a worker will accept is determined by a complex set of factors, but the extent of his need for income—especially if he has a family to support—will usually be decisive. If he has a financial reserve, he will tend to hold out for his accustomed standard of living; otherwise he will accept what he can get. The effect of unemployment insurance, relief, and similar measures is to give the worker reserve sources of income, and thus raise the lower limit of the wages he will accept. This tends to decrease the supply sharply if the employer's wage offer is less than the income obtainable from such alternative sources. Farmers during the 1930's learned this well, finding that, when they offered agricultural laborers wages lower than those currently paid on work-relief projects, they got very few workers. Sometimes this forced farmers to offer higher wages; at other times they used political influence in an effort to get relief rolls reduced during the planting or harvest season. Union solidarity provides another incentive to workers to keep the lower limit of wages relatively high and to accept no employment at a lower rate. During the 1930's building craftsmen in larger cities, members of unions affiliated with the American Federation of Labor, insisted upon high wage rates even though their hours of work—and hence their earnings—fell markedly.

Between these two limits, what forces determine the point at which wages actually will be fixed? Of prime importance is the degree of competition on each side of the market, and hence the relative bargaining strength of workers and employers respectively. Unionized workers comprising the entire available supply of a particular type of labor usually can gain a higher

wage than each worker could if he tried to bargain individually. Conversely, if a single employer furnishes the entire demand for a particular type of labor in a given market, he may be able to dictate the wage without any bargaining whatsoever. Prior to 1933 in this country, the worker usually did little bargaining with his employer. In effect, he commonly took the job and then inquired how much pay he was to get for it. The immigrant workers who flooded our Eastern cities by the hundreds of thousands during the period from 1880 to 1910 had so little bargaining strength that they were obliged to accept almost any wage offered.

In recent years legal regulation has played an important part in determining the exact point at which wages are fixed. Minimum provisions of the present Wages and Hours Act sometimes fix the actual wage, especially in industries which formerly paid low wages. Here government power has been an effective substitute for bargaining strength on the part of the workers. Some employers who could not pay the minimum fixed by law have had to go out of business. Perhaps this is no more than right, since industries which cannot afford to pay their workers the low minima set by the law may very well be uneconomic, in that they inflict social costs (by exploiting their workers' ignorance of opportunities elsewhere) that are greater than the value to the community of the goods or services they produce.

WAGE DIFFERENTIALS

The most important causes of wage differentials may be summarized as follows:

1. Differences in bargaining strength relative to employers. This enables some workers to maintain higher acceptable wage levels and standards of living than others.

2. Differences in productivity of the individual workers caused by differences in skill, efficiency, or equipment employed in work.

3. Differences in available supply of labor caused by the unequal difficulties of learning different occupations and unequal degrees of skill required.

4. Differences in the degree of protection offered various worker groups under the law.

It is important to note that most existing wage differentials are the results of all or most of the factors above, as well as of particular market situations. This will be clearer if we consider and contrast two typical cases.

Fruit pickers in some states receive exceedingly low wages. They are comparatively unskilled, so that almost anyone can compete for such work

e contribution of any one of them to the value of the output is small. ıst of them have few funds or other reserves and must subsist on relief en unemployed. Their accustomed standard of living is usually low, and ir lack of bargaining strength has frequently forced them to even lower ıdards, particularly at times of low crop prices. They rarely have union ;anization to protect their interests. Finally, and not least important, they specifically excluded from almost all government protection accorded ny other groups of workers as regards minimum wages, unemployment urance, and rights of collective bargaining. It is not strange, therefore, t this group is one of the lowest paid in the country.

Quite different is the situation of a locomotive engineer. He is a skilled ırker having a responsible job on which lives depend. He belongs to a ɔng union which controls the supply of engine-drivers in this country l which could stop railroad traffic if its members became dissatisfied with ırking conditions. Since locomotive engineers are vital to the national lfare, they not only receive the governmental protection afforded other ırkers, but additional consideration including special provisions for gov- ımental intervention to settle their grievances and mediate their disputes. hen they work, therefore, their wages are relatively high, and other con- ions of their work relatively favorable.

?ERCUSSIONS OF WAGES AND EARNINGS

Thus far we have considered workers' incomes as passive factors de- mined by bargaining. They also are active, and exert influences of their 'n. This was recognized in our analysis of the ideal market where it was inted out that if ditchdiggers' wages were raised above those paid in ıer occupations many more workers would seek such jobs. Usually it :es time for supply to become adjusted to changes in wages. During this riod some enjoy a differential gain if supply is relatively scarce, or some fer total or partial unemployment and low wages if supply is relatively ındant.

A second type of repercussion arises from the effect of wages on the ırkers themselves. High wages in the United States are partly a result of ; skill, efficiency, and energy of America's workers. Yet it also appears ıt the relatively high standard of living enjoyed by workers in this coun- ' has contributed to their ability to produce more efficiently.

Increasing wages may cause employers as well as workers to become ɔre efficient. Before 1910, the women's clothing industry in New York nsisted largely of sweatshops in which immigrant workers toiled for long

hours at very low wages. With such low labor costs, employers could make profits without planned production or the most efficient machinery. When a union was organized, and public attention called to the undesirable conditions in the industry, employers were forced to raise wages substantially and otherwise to increase their costs. To stay in business, therefore, they were compelled to increase their efficiency of production by better organization of their work and the use of better equipment. And it was found that, even with higher wage costs, their increased production and sales receipts enabled them to continue in business and to make satisfactory profits.

Just how improvements in methods of production will affect the immediate welfare of the workers concerned is, however, uncertain. The case of the women's clothing industry is an outstanding example of benefit to the workers; increased efficiency made it possible to raise wages of workers substantially without a proportional increase of labor costs. The industry expanded rapidly, and no large-scale unemployment resulted from the new methods. In some industries, especially the more mechanical ones, there are potential upper limits of wages not much higher at times than the "going rates" paid certain classes of workers. If actual wages rise above these upper limits, employers find it economical to introduce "labor-saving" devices. Frequently this takes the form of substituting machine processes for manual ones. A somewhat different kind of example occurred about 1930, when it became common for railroads to operate "mile-long" freight trains instead of the shorter trains that previously had been run. It was widely believed at that time that the railroads took this action to reduce the labor costs due to train crews. The railroads claimed that these costs were excessive. Many railroad workers became totally or partially unemployed by this change.

HOURS OF WORK

Intimately connected with the question of wages is that of hours. This is one of the key matters which must be decided in the agreement, formal or informal, which is reached between workers and employers. Upon the number of hours worked per week depends not only the output of the employee, but usually also his earnings.

At first thought, one might suppose that it is to the employer's interest to have his workers labor for as long as possible. But scientific research and actual on-the-job experience have shown repeatedly that there is an optimum number of working hours per day. Excessively long hours sometimes cause total production to fall below what it would be if workers were em-

ployed only for the optimum period. Such factors as fatigue, resentment, and ill-health contribute to this result.

From the worker's point of view, the optimum number of hours of work depends upon several factors. If he is paid a fixed salary per week, month, or year, he will (in the short run) gain as much from working relatively few hours as from working relatively many. If he works for a wage per hour, or on the basis of piece rates, he will have to balance two considerations in deciding how long he prefers to work. On the one hand, the longer he works the more he will earn at the fixed wage or piece rate. On the other hand, the longer he works, the more fatigued he becomes, the more his efficiency may be impaired, and the less leisure he enjoys.

Full-time and actual hours. It is necessary that we distinguish between two concepts—full-time hours and actual hours of work. Full-time hours is the number of hours a week agreed upon as standard at the time the worker is employed. The actual number of hours worked each week, however, may be either less if business is low, or more if business is brisk. In the latter case the worker usually is paid at a higher *overtime* rate for the number of extra hours that he works during a given week.

In many industries wages are fixed by the week. For that reason if the number of full-time hours required to earn those wages is decreased, the result is equivalent to an increase in hourly wages. Conversely if the number of full-time hours is increased, the effect is the same as if hourly wages had fallen.

Hours worked in American industry. Corresponding to the upward trend in earnings already noted, another sign of the improving absolute position of workers in this country has been the steady decrease in the average number of full-time hours of work per week. Early in the nineteenth century, the normal working day was at least from sunrise to sunset, and six days work a week was the rule. These long hours, springing from the customs and religious background of the time as well as from the necessity of working hard in order to produce all the goods needed, seemed natural to the people of that period. Owners of industrial equipment thought that continuous and long labor from their employees was the only way to insure profits from the use of their expensive machines, while workers objected less than might be expected, because their low piece rates or time wages necessitated long hours in order to bring sufficient earnings.

The various agitations for the ten-hour day, the eight-hour day, and more recently, the thirty-hour week, have assumed the character of crusades. Arguments for shorter hours were based largely on the essential humanity of the wage earner, and his right to and need for leisure time in

which to rest and obtain recreation. Since such pressure can be most effectively exerted on governments, the United States, as employer, has long been a leader in the movement to shorten hours. In 1836, government workers successfully appealed to President Jackson to grant them the ten-hour day, and soon thereafter, in 1840, President Van Buren issued a blanket order that this be the standard working day on all public-works projects. The regulation of working hours is a much older type of state intervention than action with regard to wages. Here also the states took the initiative, and women and children—until recently—were the only ones to receive protection. Massachusetts was first to limit children's daily working hours in 1842, while New Hampshire set a ten-hour day for women in 1847. Other states followed their lead, but progress was slow because of the strong influence of laissez-faire ways of thinking. However, increasing evidence of the harmful effects of long working hours upon women and children (and also upon men, though this did not receive legislative and judicial recognition until much later) succeeded in overcoming these legal and philosophical scruples.

With the passage of time, full-time hours in industry dropped fairly steadily. By 1890, average full-time hours in manufacturing were about sixty per week. By 1920 they had dropped to fifty, and they remained rather stable at that level until about 1933. Between 1933 and 1940, there was a further sharp drop to forty hours a week. Yet hours continued well above those figures in many small-scale workshops and service occupations. In 1938 the federal Fair Labor Standards Act instituted a maximum week of forty-four hours, later reduced to forty hours, and required that overtime rates be paid for hours worked in excess of this number. In 1945, upon the return of peace, the federal government again pioneered by establishing the five-day week as the standard for its office workers.

With regard to hours we again find significant differences among industries and among regions. These frequently correspond inversely to wage differences. Agricultural workers tend to work many more hours per day and per week than do wage earners in most other industries. Here again the low bargaining power of farm laborers, and their exclusion from protective legislation, furnish part of the reason. In the mining of bituminous coal, on the other hand, the drop in full-time weekly hours between 1890 and 1937 was from sixty to thirty-five. In this case strong union and governmental intervention on an extraordinary scale has been mainly responsible. The relatively long hours which have been customary for industrial workers in the South are well known; here again the Wages and Hours Act is making for uniformity throughout the nation.

THE SCOPE OF PUBLIC POLICY TOWARD LABOR

Almost every action of a governmental unit affects the labor market in some way. Thus, free public education tends to increase the supply of skilled, clerical, and professional workers by providing increased opportunities for acquiring knowledge. But labor policy is usually thought of as consisting of those governmental measures immediately affecting employers and workers in their relations with each other. Policy affecting labor does not necessarily consist of affirmative actions; the very absence of any law or court decision regulating the employment of child labor permits such labor to be employed, and so is just as important in a negative sense as a statute forbidding employment of children would be in a positive sense.

Labor policy may deal with the technical operation of the market in bringing together supply and demand, as with public employment services. The larger sphere of public policy, however, is concerned with conditions of supply and demand, and the complicated set of relationships entered into by workers and employers. Most important are laws governing collective bargaining and the respective rights and duties of employers and labor unions, a topic which is postponed to the following chapter. But the state also affects the labor market in many other ways. Thus we have legislation determining what people may be hired as workers, regulating hours, wages, and other working conditions, and in general dealing with every aspect of labor markets. It is with the non-collective-bargaining phases of public policy that we are concerned here.

The political structure of our nation, with its several kinds of separation of powers, is of tremendous importance with regard to public policy toward labor. The restriction of Congressional action to matters affecting interstate commerce leaves a wide area of jurisdiction to state legislatures, so that there are many variations from state to state as regards labor-market regulation. This permits states to compete with each other in attracting industry by failing to enact legislation placing certain restrictions on employers, such as may have been passed by other states. Our Southeastern states during recent years have attracted manufacturing in this way. Further complexities and inconsistencies result from our hierarchy of state and federal courts, with different courts often rendering conflicting decisions.

Laws passed by Congress and state legislatures that are charged with being inconsistent with the federal Constitution are subject to review by federal courts. Acts of a state legislature are subject to review by the courts of that state, with regard to the validity of the acts under the state's consti-

tution. The Supreme Court of the United States and the various highest courts of the several states are final arbiters in their respective spheres. Not until the appropriate court has passed on the issues of constitutionality in a particular case is the validity of the contested law established. Even then, under the influence of changed public opinion and of shifts in the employer-labor balance of power, decisions may later be reversed, as actions of the Supreme Court in recent years have shown. Such are some of the difficulties confronting labor legislation.

The demand by labor unions for active governmental intervention in employer-worker relationships is a relatively recent development. The American Federation of Labor, in particular, believed in a policy of "voluntarism" and urged its members to rely on their organized economic strength rather than on appeal to the state, as the means of improving their lot. Not until the depression of the early 1930's had greatly weakened the unions did they change their attitude; they have since fought vigorously for governmental aid in establishing at least minimum standards. Union strength is relied upon to obtain from employers benefits above the minima fixed by law.

POLICY TOWARD THE SUPPLY OF LABOR

Transformations in our economic life during the past hundred years have drastically changed the policy of our government toward the supply of labor. In his *Report on Manufactures*, Alexander Hamilton recommended the wider employment of women and children to augment the industrial working force. At other times immigration into the United States has been deliberately encouraged with the same object. Such trends have gradually been reversed. Even before the Civil War eight states had passed laws limiting the employment of children; by 1900 more than half the states had child-labor laws. Today agriculture and the so-called street trades (e.g., the distribution of newspapers and the delivery of telegrams) remain the most important occupations in which children are still employed.

Acts of Congress prohibiting child labor in interstate commerce have been declared unconstitutional by the Supreme Court; a constitutional amendment was submitted to the states in 1924 to give Congress the right to prohibit the employment of persons under eighteen, but to date has not been ratified. However, in 1941 the Supreme Court upheld the Fair Labor Standards Act of 1938 which prohibits the interstate shipment of goods produced in establishments employing children under sixteen years of age.

Many states bar the employment of women in certain industries, and others limit their hours of work. Meanwhile, since the early 1920's federal statutes have severely limited immigration from foreign countries. Efforts of labor unions to remove potential competition from this source played an important part in the enactment of the quota laws.

MINIMUM-WAGE LAWS

Only within the last three decades has public policy intervened with respect to wages. For most of our history, the determination of wage rates was left to the unregulated bargaining of workers and employers. The result was that favorably situated groups of skilled workers fared well, but weak labor groups were often forced to accept very low pay. Even though the health and morals of workers in the latter groups might be in jeopardy, the state took little interest in the question until fairly recently. Such lack of interest was of course consistent with the traditional principle of *laissez faire*.

Minimum-wage legislation has been, in this country, the most popular approach to the problem. Before 1933 these laws applied only to women and children. Agriculture and domestic service were usually exempted while enforcement often was ineffective even in the industries covered. In the famous case of *Adkins* vs. *Children's Hospital* in 1923, the Supreme Court invalidated the District of Columbia minimum-wage law for women workers on the ground that it violated the Fifth Amendment to the Constitution.[1] In 1937 the Supreme Court reversed this decision and made minimum-wage laws a legal exercise of the state's police power. Today more than half the states have minimum-wage laws, using the cost of living as the basic factor in determining the minima.

For a long time federal action was confined to establishing minimum wages in particular areas of economic activity, such as railroad operation, bituminous-coal mining, the merchant marine, and sugar-beet cultivation. Some minimum wages were fixed directly; sometimes agencies to settle wage disputes were established. Federal intervention on a broad scale, however, did not come until the passage of the Fair Labor Standards Act of 1938, which applies to enterprises engaged in interstate commerce, except those connected with agriculture, fishing, and certain types of selling and service. The statutory minimum wage fixed for all workers in 1938-39 was twenty-five cents an hour. It was then raised automatically to thirty cents, and by 1945 the legal minimum was to have been forty cents. But the grow-

[1] 261 U.S. 525.

ng cost of living during–and especially after–World War II has led to further legislative revision. At present the minimum is fifty-five cents an hour, and proposals have been made to raise it further to sixty and even seventy-five cents an hour.

Many of the people who work for wages are in a stronger bargaining position than has been indicated in this general account of labor markets. Their greater strength is due to their organization into labor unions for purposes of collective bargaining. How this has come about, and its effects on markets for labor. will be described in the chapter which follows.

Industrial conflict: employers, unions, and the public

Our analysis of an ideal free labor market focused on two conditions necessary to its operation: (1) the existence of competition among many would-be employers of labor on one side and among many jobseekers on the other; (2) equality of economic strength and bargaining power of each employer and each employee. An examination of conditions actually existing in labor markets indicated, however, that pure competition and individual equality of bargaining power do not, in general, exist. In the first place, as we saw in the last chapter, the state has tended more and more to regulate terms and conditions of employment. In the second place, individual workers early found that they were at a disadvantage in bargaining, because employers usually were stronger as individual bargainers, because employers frequently had understandings with each other, and because periods when jobs were scarce appeared all too frequently.

UNIONS AND THE MARKET

It is not surprising that workers should have taken steps to remedy this disparity of bargaining power. The most important of such steps has been the formation of labor unions. A union is essentially a device for reducing workers' inequality in individual bargaining, and aims at replacing it if possible with a situation weighted in favor of the workers. The method is that of uniting many individual workers and using their combined power to improve their bargaining position as against their present or potential employers, especially in negotiations concerning wages, hours, and other working conditions. By lessening competition among workers, unions seek to counteract the diminution of competition among employers.

Craft and industrial unions. Labor unions may be classified according to the principles of organization that they employ. In discussing the labor movement, it is customary to distinguish between craft unions (or trade unions) and industrial unions. Strictly speaking, craft unions are organizations whose members have some particular skill or are trained in a special craft. Such a union is concerned only with the labor markets for the type of worker it represents. The bricklayers' union is an example of a craft union dealing with one type of narrow labor market. An industrial union, on the other hand, embraces many workers of different kinds of skill and with different types of training, all engaged in some particular branch of economic activity. The United Automobile Workers of America is an example of an industrial union; its membership consists of workers doing many kinds of jobs in the automobile and related industries. The union must, therefore, concern itself with the many labor markets in which the various kinds of services performed by its different members are demanded and supplied.

Many unions have a scope somewhere between these two. For example, the carpenters' union of the American Federation of Labor is a multicraft organization embracing different kinds of workers with wood, from lumberjacks to furniture-makers, as well as workers employed on other materials.

Market policies of unions. A union must adopt some fairly continuous policy toward the labor market. Two extreme positions may be contrasted: On the one hand, the union may accept the existing market system unreservedly and interest itself *only* in improving the worker's bargaining position, increasing his money income, and bettering his working conditions. This policy has been characterized as "business unionism." It reflects an attitude toward the market which, in a sense, regards the worker as a businessman selling a commodity, his labor, for which he seeks the best possible price. On the other hand, a union may reject the labor market and seek to end its constraints. Workers' groups taking this attitude aim at a somewhat different organization of society. They may be revolutionary unions interested in the establishment of a socialist or a co-operative state. Actually, most unions seek to gain the best terms possible within the framework of the existing labor market. Simultaneously they strive to modify the market structure and the rules governing its operation, in order that labor organizations may secure greater bargaining power. More pay, shorter hours, and better working conditions are the usual objectives of unions in the United States.

COLLECTIVE BARGAINING

In order to secure their objectives, unions seek to substitute for individual bargaining between employer and employee, collective bargaining between many workers and one or more employers. Control of the labor supply is the basic power of any union, and it is toward securing this that its efforts are constantly directed. In collective-bargaining negotiations, the union's representatives speak for many workers. Ordinarily the union members agree beforehand to accept whatever terms are worked out between the employer and the union negotiators. The employer is thus prevented from playing off one worker against another in order to lower wages or secure a longer workday. Instead, he must deal with all workers of a given kind, or at least with an organized group of workers, simultaneously.

Where they have won the right to represent many workers, unions strive to negotiate written contracts with employers. These usually specify all the conditions of work, especially as regards wages and hours. Where a union is sufficiently strong the agreement may provide for a *closed shop;* in that case, the employers pledge themselves to hire only union members. In a closed shop the union has complete control over the labor supply. While closed-shop agreements were rendered unenforceable by provisions of the Taft-Hartley Act of 1947, the issue remains important. Instead of a closed shop, the employer may retain his right to hire persons who are not union members, but may agree to make it a condition of employment that such persons take out a union card within a specified time limit. Such an agreement, known as the *union shop*, gives to labor unions only slightly less bargaining power than does the closed shop. If neither a closed nor a union shop can be obtained, the union seeks to establish a *preferential hiring system* under which union members will enjoy greater opportunity of employment than will nonmembers. In addition, employers may be asked to require those employees who are union members at the time of the agreement to remain members in good standing, or else suffer dismissal from employment. Such a provision is known as *maintenance of membership*, and was frequently resorted to as a compromise in settling labor disputes in World War II. Finally, an employer who hires workers without regard to union membership and is content that they should remain nonmembers maintains what is known as an *open shop.*

A collective agreement usually covers, in a detailed fashion, only major issues. To settle minor disputes or to enable workers to have grievances adjusted, many such agreements provide for a shop steward system whereby

union representatives in each branch of the enterprise negotiate frequently with agents of the employer in an effort to maintain harmony. In some industries, agreements provide for boards of arbitration, composed of one or more impartial arbitrators together with representatives of the employer and the unions, with power to decide differences after hearing relevant evidence.

Some unions have such a degree of control that the employer is forced to bow to unpleasant union dictates. In the construction industry, for instance, employers sometimes cannot use new kinds of materials or have certain work done away from the building site, if such actions tend to deprive carpenters or other skilled building workers of job opportunities. The union is able, in this case, to exploit to the utmost its control over the supply of skilled labor in order to secure for its members special advantages. As a result, building costs are higher than they otherwise might be, thus tending to reduce the total volume of building activity. Similar restrictions imposed in other industries have frequently been attacked on the ground that they lower output and raise prices.

THE TACTICS OF UNIONS

Two important necessities face every union. The first is to gain the adherence of workers, and thus obtain control of the supply side of the labor market. The second is to secure recognition of the union by the employer so that he will engage in collective bargaining with its representatives.

To enroll and retain members, unions must be able to offer them substantial advantages. Union membership involves the payment of initiation fees and regular dues, limits the individual worker's freedom of bargaining, and subjects him to actual loss, if and when he is called out on strike. Workers are unlikely to submit to these conditions unless convinced that the gains will far exceed the resulting inconveniences and costs.

Gaining members. Recruiting new members for a union is called organizing; it involves promising the achievement of certain goals in return for union adherence. Thus workers are told that if the union becomes strong enough their pay will be increased, their hours of work reduced, their grievances remedied, and their working conditions improved. Where workers are discontented, of course, such promises are alluring and frequently suffice to enroll many members.

Retaining members. Once workers are enrolled, the problem becomes one of retaining their allegiance. If the employer has signed a closed-shop

agreement, the task is greatly simplified, as union membership is made a prerequisite for holding a job. But even here a union must be careful not to lose the support of its members; if it does, an employer, with the approval of his employees, may refuse to renew the contract.

Certain methods used by unions to retain their members are fairly well standardized. One is by successfully improving conditions of work and then playing upon the fear that if the union is weakened these gains will be lost. A second is by offering their members old-age pensions and unemployment-insurance benefits to protect them in some measure against economic insecurity. The insurance functions of labor unions have, however, become much less important since the passage of the Social Security Act of 1935.

Securing recognition. To gain recognition and collective-bargaining rights often requires more spectacular action than does the drive for membership, although the two are closely related. If a union commands the allegiance of all or almost all of the employees of a large concern, it rarely experiences great difficulty in establishing peaceful relations with the employer. More usual is the case in which a union represents only part of the workers in a given enterprise but desires to become the bargaining agent for all. The result is likely to be industrial conflict over the issue of union recognition. Industrial conflict also may result, of course, from disagreements between employers and unions over the wages to be paid or other conditions of work.

The most effective weapon in the hands of a union seeking to bend an employer to its will is the *strike.* The union seeks to exercise complete control over the supply of labor by cutting off the employer's entire labor force and paralyzing all activity within his establishment until he capitulates to its demands. The concern is thus prevented from making profits, is frequently forced to meet additional costs in fighting the strike, and runs the risk of losing customers to its competitors. In order to make the strike as effective as possible, the union may *picket* the plant and seek to dissuade workers or customers from entering the premises. To be legal, such picketing must be peaceful, but frequently mass picketing, in which hundreds or thousands of workers participate, has led to pitched battles between strikers and police or other groups. During the course of a strike, unions seek to dissuade the public from patronizing the employer who is being fought. This stratagem is known as the *boycott.* The same procedure is involved when union workers, not directly engaged in a dispute, refuse to use materials produced by an antiunion employer or one whose workers are on strike. This is known as a *secondary boycott.*

Once a union's jurisdiction or sphere of operation is marked out, the union tends to regard not only the workers covered, but also the jobs involved, as necessarily subject to its control. Hence jurisdictional conflicts may arise between two unions, each of whose members are competent to do a job on the borderline between their respective fields. Such disputes have arisen with particular frequency in the building trades. For instance, the carpenters' union has asserted its control over all work done with wood, or which was *once done with wood*. Thus, if a certain kind of wall trimming was formerly made of wood and installed by carpenters, the union still claims jurisdiction over the installation of such trimming even though the material now employed may be a metal, or some plastic, requiring techniques far different from those ordinarily associated with the craft of carpentry. Disputes of this kind have often been waged between different craft unions, and have been costly both to the workers involved and to their employers.

THE TACTICS OF EMPLOYERS

It is sometimes popularly assumed that all employers are opposed to unions and fight bitterly against organization of their workers. In contradiction to this stands the fact that many unions have secured the right of collective bargaining without meeting employer opposition. Yet a large number of employers has shown enmity toward unions. Their opposition has usually been of a twofold nature. First, they have tried to prevent the spread of union influence among their workers. Second, they have attempted to break such unions as have succeeded in enrolling many of their employees as members. The National Labor Relations Act of 1935 and other government measures materially reduced the scope of employer action against unions.

Under the National Labor Relations Act, an employer must recognize and bargain collectively with any union that is able to establish that its membership includes at least a majority of some important group of his employees. Where the union does not command a majority, he is under no obligation to recognize it, although the union may attempt to force the issue by calling a strike.

In the past a variety of weapons were available to an employer for use against union organizational work among his employees. He might require all of his workers to sign a *yellow-dog contract*, by which they agreed not to join a union while in his employ. He might discharge any worker whom

he suspected of union membership or sympathy. He might instigate and set up a company union, that is, an organization limited to his own employees, and headed by people friendly to his interests who would not adopt policies of which he disapproved. These and other practices are today illegal, although prior to 1935 they frequently played important roles.

In combating a union, the employer's chief weapons are: (1) He may suspend operations and deprive his workers of employment until the union accedes to his demands. Such a *lockout* is the employer's equivalent of a strike; its effectiveness will often depend upon the strength of the employer's resources as compared to those of the workers and their union. (2) To break a strike, the employer usually endeavors to keep his business operating despite the walkout of union members. To achieve this purpose he frequently employs *strikebreakers*, men who will deliberately cross picket lines and accept jobs left vacant by the strikers. But the employment of such individuals is usually expensive both because of the high rate of pay demanded, and their inefficiency at the necessary tasks. Hence their importance is more psychological than economic in nature so far as continued operation is concerned. But by leading strikers to believe that the employer has obtained a supply of labor despite the walkout, such strikebreakers may decide the issue against the union. (3) Employers often appeal to the courts for an *injunction* restraining picketing or other union activities on the ground that these will lead to violence or damage whose consequences are not remediable. Denied the right to picket or to publicize their strike, unions are placed at a great disadvantage. Hence they have fought vigorously against the power of judges to issue such orders. (4) The employer's most potent weapon, of course, is his economic strength, his ability to outwait his workers, who cannot remain indefinitely without a job if they are to support themselves and their families.

It should not be overlooked that both unions and employers have frequently sought government aid, directly or indirectly, in their conflicts with each other. This has required political activity on the part of both, and has played an important role in shaping public policy toward labor markets.

THE TACTICS OF INDUSTRIAL PEACE

Strikes and other forms of industrial warfare are always expensive for both sides engaged in them. Since they often result in injury or death to some of the people concerned and in great inconvenience to the public at large, they also are, morally and materially, expensive to the community.

For these and other reasons, it is most desirable that means be available for settling disputes without strikes, or, if a strike is in progress, for ending it as quickly as possible. The chief methods used are mediation and arbitration.

Mediation. The essential feature of mediation is the entrance of some third party into the situation. The parties to the dispute may find it difficult to negotiate with each other, but often they can and will discuss matters with an impartial outsider. He seeks to learn their viewpoints and grievances, and to secure concessions from each so that a compromise settlement can be made. Mediation has often succeeded in bringing together employers and workers who were previously far apart.

In 1913, when the Department of Labor was created, there was incorporated within it the present United States Conciliation Service, which sends mediators to any section of the country where disputes threaten or actually break out. In 1947 the agency was made independent of the Labor Department and renamed the Federal Mediation and Conciliation Service. Several of the states also maintain their own mediation machinery.

Arbitration. There are several different forms of arbitration, but it consists essentially in the reference of a dispute to one or more impartial individuals who study the facts and then render a verdict. Arbitration may be resorted to voluntarily or it may be made compulsory. The parties to the dispute may or may not be compelled, either by previous agreement or by law, to accept the award. Several countries—but not the United States—have laws which make the arbitration of disputes mandatory; some require also the acceptance of the arbitrators' judgment. Compulsory arbitration with compulsory acceptance of the award has often been urged in the United States as a means of preventing strikes altogether and insuring industrial peace. Whether it would achieve this objective is uncertain. Almost all sections of organized labor have consistently opposed it as a limitation on their freedom to strike, while employers have been fearful that its use by a government friendly to labor might force them to grant ever greater union demands. In periods of crisis, such as wartime, compulsory measures may be adopted temporarily as a means of avoiding production stoppages.

Government intervention to mediate and arbitrate labor disputes has its longest history in the railroad industry, where such action was begun under the Erdman Act of 1898 and has since been continued in different forms under various other acts. An amendment of 1934 to the Railway Labor Act provides for a National Railroad Adjustment Board. This body seeks to settle controversies over the interpretation of *existing* provisions concerning

wages, hours, and working conditions, while the National Mediation Board deals with proposals to *change* terms of existing contracts between railroad companies and unions of their employees.

DOMINANCE OF BUSINESS UNIONISM

One basic fact must be emphasized in any study of union development in this country: the drive for labor organization in the United States has always been a minority movement, and is so today, although unions have increased in importance in recent years. In 1910, union membership embraced only about 10 per cent of those eligible to join. A high of 20 per cent was reached between 1910 and 1920, but a steady decline brought the figures back to 10 per cent in 1930. Between 1930 and 1940, union membership in this country more than doubled, and by 1948 roughly 30 per cent of all workers were in unions.

Before 1933, union strength was largely concentrated in a very few occupational fields, while the remainder of American economic life was relatively unaffected by labor organization. In building, transportation, coal mining, and printing, unions have long played important roles. After World War I, clothing entered the list, and together these five industries contributed more than 60 per cent of all union membership recorded annually between 1900 and 1933. But in such important activities as the production of steel, automobiles, rubber, aluminum, and glass there was little or no union strength. The same was true of millions of clerical workers and salespeople, composing a group rapidly growing in importance. Among farmworkers, many of whom would have gained considerably from union protection, a similar situation prevailed.

Union membership has traditionally been concentrated among the relatively well-to-do skilled workers. In the building trades, the carpenters, plumbers, electricians, bricklayers, and other craftsmen, long have had their powerful unions. On the railroads, the "Big Four"—the brotherhoods of locomotive engineers, firemen, railroad trainmen, and railway conductors—effectively controlled the supply of workers in their fields. During most of the history of union activity little attention was paid to the organization of unskilled manual labor or clerical work. Coal mining was one of the few fields in which an industrial union, i.e., one embracing all the workers employed in a given industry without regard to skill or craft, was predominant. Here the United Mine Workers enjoyed—but with occasional lapses—considerable strength. Its noncraft character was explainable in part by the

isolation of most mining communities, which made for unity among different types of workers employed by the same operators and bound to each other by common problems and interests.

From 1890 to 1920 union membership increased fairly steadily, although temporary losses of some severity were suffered in times of depression, as in 1904-06 and again in 1913-15. A phenomenal increase took place during World War I when governmental intervention for industrial peace, plus official recognition of union leaders as workers' spokesmen, boosted union prestige. By 1920, the AFL, which at that time included about 80 per cent of all unionized workers, totaled approximately four million members, the largest number in its history to that date. But labor organizations were hit hard by the depression of 1920-22 and suffered great losses in membership.

Even after this hectic period, American unionism retained its historical characteristics: it was still localized in a relatively few industries and occupations; in many of the nation's largest industries it had little or no strength. Highly paid craftworkers composed the bulk of the membership, and there was little interest in spreading union strength among the majority of low-paid, semiskilled and unskilled workers. From 1920 to 1933 total union membership in the United States declined almost uninterruptedly, falling back almost to its position prior to World War I. Many factors contributed to this trend. Frequently during this period employers undertook determined campaigns to weaken existing union influence and to prevent its further extension. Moreover, union leadership, particularly that of the AFL, showed little enthusiasm for vigorous organizing campaigns.

THE NEW POWER OF AMERICAN UNIONISM

The beginning of 1933 saw unionism in the United States at a low ebb indeed. Widespread unemployment in almost all fields had weakened or destroyed union control over the labor supply, and the competition of millions without jobs was undermining hard-won union wage and working-condition standards everywhere. With the inauguration of President Roosevelt in March 1933 steps were undertaken to pull the nation out of the economic stagnation into which it had fallen. Chief of these was the National Industrial Recovery Act, which in effect was made up of offsetting concessions to business and labor. Industrialists were permitted to control competition in the markets for their goods, but in return they had to make certain concessions to labor. The most significant concession was contained in Section 7A of the act, which declared: ". . . employees shall have the

right to organize and bargain collectively through representatives of their own choosing. . . ."

The effect of Section 7A was electric. All over the country thousands of workers spontaneously organized union locals and applied to the AFL and its national unions for charters. John L. Lewis, head of the United Mine Workers, sent out a large corps of organizers to spread one message among the miners: "The President wants you to join the union." As a consequence, membership in the United Mine Workers rose from 150,000 in 1932 to 400,000 in 1935, restoring its old mastery over the supply of labor in the American coal fields. In the men's and women's clothing industries, the unions also achieved sensational gains in membership as the result of vigorous organizational activity. Lesser gains were registered in almost all the traditional fields of union activity, while inroads were made in industries where labor organization had almost never played a significant role before, particularly in the manufacture of automobiles and rubber products.

DIVISION IN THE RANKS OF LABOR

The American Federation of Labor was founded in 1886 as a loose confederation of autonomous unions of different crafts. Until recently, most unions (the railroad brotherhoods were the principal exception) were affiliated with it. It remained a more or less "aristocratic" organization of skilled workers and showed but little interest in the organization of the unskilled or semiskilled in the mass-production industries, such as steel, automobiles, electrical goods, aluminum, and rubber.

At the 1934 annual convention of the AFL a determined minority group of leaders, including John L. Lewis, demanded that the federation aid in the organization of industrial unions and issue charters to them. Not willing to give up their jurisdictional claims, the craft unionists opposed bitterly the establishment of the industrial form of organization. The demand of industrial unionists was defeated at the convention, but in November 1935 representatives of eight leading industrial unions—among which the coal miners' and clothing workers' unions were strongest—formed a Committee for Industrial Organization. The executive council of the AFL accused members of this committee of "dual" unionism and suspended them, i.e., deprived them of representation in the convention of 1936. Lewis, who headed the committee, was charged with "fomenting insurrection in the AFL." The suspension was upheld by the convention.

The split became complete when in 1937 William Green, president of the AFL, ordered all state federations to expel CIO unions belonging to

them, and the CIO began to charter its own state and local bodies and to collect dues. In 1938 its name was changed from *Committee for* to *Congress of* Industrial Organizations. John L. Lewis remained president of the CIO until 1940 when he was replaced by Philip Murray, head of the powerful United Steel Workers. Two years later the United Mine Workers, headed by Lewis, withdrew from the CIO and, by an amendment of its constitution, opened membership in UMW to all unorganized workers in industry and agriculture. Recruiting of new members and "raiding" of rival unions was practiced not only by the AFL and the CIO, but also by a new organization (the so-called District 50) created for this purpose by the United Mine Workers. The split in the labor movement caused much confusion and strife but it did not result in any over-all decrease in union membership. On the contrary, both the AFL and the CIO reported steady increases in paid membership prior to and during World War II. After much dickering, the UMW returned to the AFL at the end of 1945, but withdrew again in 1947.

Despite repeated efforts to bring together the AFL and the CIO, antagonism between them has on the whole deepened with the passage of time. The cause of dissension is not confined to the issue of industrial versus craft unionism. In fact this issue has become increasingly artificial, for some AFL unions have tended to include ever wider groups of workers. Differences between the two national organizations have become personal and even ideological. For instance, William Green has charged that the CIO is a "communistic" movement, or that it is communist-controlled. His accusations became more outspoken after the CIO took an active part in the foundation of the World Federation of Trade Unions in the fall of 1945.[1] The CIO leadership vigorously denies any sympathy with communism, but adds that it refuses to interfere with the right of its individual members to belong to any political party. The issue of communism continues to occupy a prominent place in union debates. While the AFL refuses to have anything to do with the WFTU—and has tried to organize a parallel labor international on a noncommunist or even anticommunist basis—it has enjoyed a quasi-monopoly of American representation in the International Labor Organization. The latter was formed as an autonomous body after World War I (and continued as an agency of the United Nations) for the purpose of raising labor standards, but participation by the United States dates only from 1934.

[1] The trade unions of the U.S.S.R. with a total membership of thirty million are affiliated with the World Federation of Trade Unions.

THE LAW AND LABOR UNIONS

In a democratic society, the development of governmental action in any sphere is the result of many complex forces. Directly concerned are the legislatures, the courts, and the executive departments which respectively enact, interpret, and enforce the laws. Each branch of government exercises an independent influence, which is both checked and supplemented by the others. At the same time, continuous pressure is exerted by many private groups, each seeking to influence policy in a manner favorable to its interests. The National Association of Manufacturers uses its influence for one type of labor policy on the part of government, the CIO and AFL use theirs for quite another type. The power of these groups relative to each other alters from time to time, so that public policy sometimes shifts markedly as it develops.

The fashioning of the legal framework of collective bargaining, and with it the rights and responsibilities of labor unions and of employers, is fundamentally a political matter. It is not surprising, therefore, that union groups have traditionally supported candidates favorable to labor interests. Almost since its foundation, the AFL has pursued a policy of supporting for public office nominees friendly to its aims and opposing those considered unfriendly. In recent years the CIO has been even more aggressive. In the 1936 election, for instance, CIO unions contributed hundreds of thousands of dollars toward the re-election of Franklin D. Roosevelt, partly as a gesture of gratitude for his administration's earlier aid to union organization, and partly in the hope that such contributions would insure the continuance of this attitude. The contribution mentioned was a notable case of use by unions of a weapon long familiar to employers.

When legislatures are in session, lobbyists for each group utilize every means possible to influence the course of legislation. When labor cases come before the courts, the contestants employ the best legal talent available in an effort to secure favorable decisions which will not only affect those immediately concerned in the particular controversy, but may also serve as a precedent for similar cases in the future. In these and other ways the contending groups seek to influence the role of government.

UNION ORGANIZATION AND PUBLIC POLICY

Many of the legal problems faced by labor unions have had their origin in two doctrines, those of conspiracy and of restraint of trade. Both origi-

nate in the common law. Both doctrines have profoundly affected judicial decisions and legislative enactments in the field of labor organization, although they were originally developed to meet problems arising in other spheres. The conspiracy doctrine asserts that a group of individuals organized for common action has potentialities for wrongdoing that an individual alone does not have. If people combine for an illegal end, a conspiracy exists, and the very act of joining together becomes illegal and punishable at law, even though nothing ever is actually done to accomplish the illegal end. Furthermore, every act undertaken to advance this illegal objective is also illegal, although the act in itself may be within the law. The same liability at law exists when illegal methods are used to further lawful objectives. Under the common law any agreement to hinder the flow of trade was unenforceable. Any combination to enforce such an agreement was illegal and hence a conspiracy. This was the essence of the restraint-of-trade doctrine.

Not until 1842 was a degree of flexibility introduced into the prevailing judicial opposition to unionism. In the case of *Commonwealth* vs. *Hunt*, the Massachusetts Supreme Court declared a union which struck to maintain a closed shop was a legal combination since the intent was to benefit the workers. This sharply contradicted many previous decisions, such as that of the New York Court of Appeals, that any combination to raise wages was illegal *per se*. After this, unions developed with relatively little legal opposition until 1908, when in the Danbury Hatters' Case (*Loewe* vs. *Lawlor*) the United States Supreme Court declared that the union involved was a combination in restraint of interstate commerce and hence a conspiracy punishable under the Sherman Antitrust Act of 1890. The decision was a serious blow to all unions, and the fear that the Supreme Court had set a precedent under which all kinds of union activities might be held to violate the Sherman Act led to agitation for reform of the law.

A result of this agitation was that the Clayton Act of 1914 carried a clause specifically excluding labor organizations and their "lawful" activities from the provisions of the Sherman Act. Samuel Gompers declared this to be "Labor's Magna Carta," but his satisfaction was somewhat premature. The Supreme Court, after all, was empowered to decide what activities were "lawful," and it proceeded to define this term in such a manner as to make the Clayton Act's provisions have little effect on the applicability of the Sherman Act to labor unions. Since that time, the legality of the existence of unions has not been questioned by the courts, but specific union forms of the boycott, have been ruled violation

under the law. In 1939 and 1940, the Department of Justice attempted to end certain allegedly monopolistic practices of various labor organizations, particularly those of the carpenters' union, on the ground that these restrained interstate commerce and hence were illegal under the Sherman Act. The Supreme Court, however, refused to support this attitude.

LEGAL AID TO EMPLOYER TACTICS

One of the most effective weapons employed against union activity in the past has been the labor injunction. This is a court order prohibiting unions and their members from engaging in certain practices. Before the passage of recent legislation such orders were usually issued on the ground that the employer's property or other interests would be damaged unless he were protected against union action. Boycotts, picketing, strikes, organizing workers, and other union activities have been prohibited by such orders, while in extreme cases injunctions have even prohibited any person from informing any other person that a strike exists at a given establishment. Violations of an injunction, since they constitute contempt of court, are punishable by prison terms or fines. Union dislike of the injunction has been based on its widespread use to defeat strikes, together with the summary manner in which court orders often were issued, many of them becoming effective without the union involved having had an opportunity to state its case.

Yellow-dog contracts frequently were upheld by the courts in the early part of this century. In 1917 the Supreme Court declared in the Hitchman case that an attempt to organize workers who had made such agreements was appropriate ground for issuing an injunction. Even earlier, in the Adair and Coppage cases, it had declared state laws prohibiting such contracts to be unconstitutional.

LEGAL AID TO UNION ACTIVITIES

As the labor movement grew in political power, it became ever more successful in securing legislation to meet its needs, and in particular in securing reversals of court decisions harmful to unions and their activities. Most of the prounion legislation on the statute books today has been adopted since 1930, although labor secured some legislative action in its behalf before that time. We have already referred to the attempt made in the Clayton Act to exclude unions from the provisions of the Sherman Act. The

same statute also contained a clause forbidding the granting of injunctions by United States courts "unless necessary to prevent irreparable injury to property or to a property right," but there again the power to decide what constituted an irreparable injury left the courts still in possession of much of their old power.

In 1932, however, the Norris-La Guardia Act put a stumbling block in the path of efforts to use federal injunctions as means of breaking strikes or interfering with other union activities. On the premise that "the individual unorganized worker is commonly helpless to exercise actual liberty of contract and to protect his freedom of labor, and thereby to obtain acceptable terms and conditions of employment," it made much more rigid than ever before the conditions which employers have to meet in order to secure a federal injunction. The courts were now compelled to consider the results of an injunction on the union affected and to determine whether this order might not inflict greater harm on the union than the loss which would be suffered by the employer if he were denied the injunction. Moreover, the statute requires that any applicant for an injunction must show that he has done his best to settle the dispute by peaceful negotiations and by using existing government peacemaking machinery. The act also indicates specifically a number of important union activities, such as publicizing a strike or paying strike benefits, which may not be barred by federal injunction. The Norris-La Guardia Act applies only to federal courts, but about half the states also have passed anti-injunction statutes designed to curb the granting of such orders by their state courts.

THE NATIONAL LABOR RELATIONS ACT

An important event in the history of public policy toward organized labor was the passage of the National Labor Relations Act of 1935 (also known as the Wagner Act). This act, which re-enacted Section 7A of the defunct National Industrial Recovery Act, asserts that it is intelligent public policy to encourage workers to organize independent unions of their own choosing. The act itself is devoted to ways and means of effectuating this policy by providing an elaborate mechanism to assure the extension of collective bargaining. Its proponents argued that it would aid in the maintenance of industrial peace.

A National Labor Relations Board of three members was set up to administer and enforce the act. This board determines which workers shall be considered a unit for collective bargaining purposes, and then decides,

usually by holding an employee election, which union is supported by a majority of the workers in this bargaining unit. The union in question is then designated as the sole representative of all employees in the unit, and the employer involved must bargain with this organization. In general the act asserted that "it shall be an unfair labor practice for an employer to interfere with, restrain, or coerce employees in the exercise of the rights" of union organization and collective bargaining. More specifically, employers were forbidden to establish or support a company union, to encourage or discourage membership in any union by discriminating in the hiring of workers, to discharge workers who complain to the NLRB, or to refuse to bargain with the union certified by the board as representing a majority of employees in a given bargaining unit. In applying the law, the NLRB has also declared espionage and other antiunion tactics to be violations of the law.

The operation of the act has had important effects. It has encouraged union growth tremendously, and much of the expansion of labor organization since 1935 has been due to the aid given by this instrument of New Deal labor policy. Many employers have continued their opposition by appealing to the Supreme Court against the decisions of the board, but in the overwhelming majority of cases the court has ruled in favor of the NLRB. Perhaps no single difficulty has plagued the board as much as the dispute between the AFL and the CIO. In case after case, these two union groups have appeared as rivals, each asking that the board certify one of its unions as the bargaining agent for a group of workers. In deciding such cases, the board has, at different times, incurred the enmity of both the CIO and the AFL. Each has declared the NLRB to be biased and unfair when decisions have gone against it. Were it not plagued by the CIO-AFL conflict, the execution of the board's duties would become much simpler.

The Wagner Act does not cover agricultural laborers, domestic servants, railroad workers (who have their own machinery for collective bargaining under the Railway Labor Act), and some minor groups. Since the act applies only to workers in enterprises engaged in interstate commerce, several states have passed "Little Wagner Acts" applying much the same public policy toward enterprises whose dealings are intrastate. These have not had the stormy path of the national act, but their operation too has been impeded by employer opposition and by the AFL-CIO conflict.

That the Wagner Act was of enormous benefit to American labor unions, and that it greatly strengthened their bargaining power, is admitted on all sides. Yet it failed in one avowed purpose—to bring an end to juris-

dictional disputes between rival unions. Whether the act resulted in fewer, or (as some have claimed) more numerous, strikes is an issue which will remain unsettled.

PASSAGE OF THE TAFT-HARTLEY ACT

The constitutionality of the Wagner Act had not long been established before proposals for its amendment were made. Such proposals aimed mainly at easing restrictions on propaganda by employers and diminishing immunities of labor unions, or at simplifying procedure in cases before the National Labor Relations Board. By and large, however, the nation appeared to believe during 1935-41 that it had set up something approaching a satisfactory legal framework within which collective bargaining might operate. During World War II most unions voluntarily gave up the right to strike and the question of revising the Wagner Act was held in abeyance.

Between the collapse of Japan in the summer of 1945 and the close of 1946, a series of events brought public dissatisfaction with the Wagner Act to a head. (1) Relieved of their wartime renunciation of the strike, and faced with a continued strong demand for labor and also a rising cost of living, many unions decided to back claims for higher wages by striking. Disputes tied up the coal mines, the railroads, the merchant marine, and other industries for brief periods, while strikes of public-utility workers temporarily deprived a number of cities, among them Pittsburgh, of electric service. These disputes, many of them greatly inconveniencing the public, led to a strong demand for some unspecified change in the Wagner Act; there was a general feeling that changes in the law might promote industrial peace. Yet no agreement existed as to where the trouble lay. (2) The question whether, under the Wagner Act, foremen had the right to organize and bargain collectively was decided in the affirmative. Despite much opposition from employers, who maintained that foremen exercise management functions, the National Labor Relations Board late in 1945 recognized their right to organize. (3) In the fall of 1946 a Republican majority was elected to both houses of Congress. The Republican party of course felt no responsibility for the Wagner Act (a New Deal measure) and was perfectly ready to amend it if that should be the desire of its constituents.

After lengthy hearings and prolonged debate Congress passed the Labor-Management Relations Act of 1947, better known as the Taft-Hartley Act. Vetoed by President Truman as administratively unworkable, it was repassed over the President's veto and became law in June 1947. The new law revised the legislative framework of collective bargaining in the em-

ployer's favor; it has been claimed, too, that it increased the power of t individual union member as against union officials. Whether its provisio were well designed to promote industrial peace, as claimed by its authors, a moot question.

PROVISIONS OF THE TAFT-HARTLEY ACT

The closed shop and union security. The Taft-Hartley Act declar closed-shop agreements unenforceable, although the union shop, whereb new employees are required to join a union after being hired, is still pe: mitted. However, a union shop must now be approved by a majority of a employees instead of a majority of those voting, thus throwing against th proposal such apathy as there may be among the rank and file. In additior where a union shop is in operation, a union can no longer force an employe to discharge a worker for any reason other than nonpayment of dues. Thi means that if a member is disciplined by his union, say for antiunion activi ties, he can still continue to work in the plant. Moreover, the law respect state legislation prohibiting the union shop.[1] The task of maintaining "unio security," that is, a stable relationship between unions and employers unde which employees have definite motives for joining unions and paying dues is rendered measurably more difficult for union officials.

Unfair labor practices. The Wagner Act had outlawed a number of unfair labor practices by employers, e.g., dismissal of workers for unior activity. The Taft-Hartley Act defines a list of unfair practices by unions against employers, and declares them illegal. Some of these are made legal grounds for damage suits by employers. In this category are: jurisdictional strikes, secondary boycotts, and strikes designed to force an employer to bargain with one union after the National Labor Relations Board has approved another union as the sole bargaining unit. Other unfair practices by unions can be made the subject of a complaint before the board by the employer, though not of damage suits. Such practices include attempts to coerce workers to join a union, to coerce an employer to deal with one union rather than another, to levy excessive or discriminatory membership fees where union-shop agreements are in force, and attempts to make an employer pay for services not actually performed (a practice known as "featherbedding").

[1] The union shop (as well as the closed shop) is banned in thirteen states: Arizona, Delaware, Florida, Georgia, Arkansas, Iowa, Maine, North Carolina, Nebraska, South Dakota, Tennessee, Texas, Virginia.

The right to strike. With a view to the peaceful settlement of labor disputes, the Taft-Hartley law surrounds the right to strike with a number of restrictions whose effectiveness is very hard to judge. There are three principal provisions of this kind. (1) Sixty days' notice must be given of the expiration of any labor contract, and strikes within that period are banned. Employees who strike notwithstanding, lose whatever rights they have under the act, and may not vote in future union elections. (2) Strikes by federal employees are declared illegal; that is to say, striking federal workers are automatically discharged, lose their civil-service status, and are ineligible for federal employment for three years thereafter. (3) Whenever the President declares that a threatened or actual strike or lockout endangers national health or safety, the new law requires a compulsory cooling-off period of eighty days for attempts at peaceful solution of the dispute. If the strike or lockout should nonetheless occur before the eighty days are up, the Attorney General may apply for an injunction. This provision amends the Norris-La Guardia Act.

Status of foremen. The Taft-Hartley law decides the long-disputed issue as to whether foremen and other supervisors are "employees" for purposes of collective bargaining. They may organize if they wish, but they cannot compel their employer to recognize any union they join, or to bargain with them collectively.

Political contributions. The apparent success of the Political Action Committee (a "subsidiary" of the CIO) in defeating a number of Congressional candidates deemed unfriendly to labor in the 1944 elections led to a demand for the prohibition of political expenditures by labor unions. Corporations have long been forbidden to make such contributions; the Taft-Hartley Act extends this prohibition to labor unions. The ban is strict and apparently may even prevent the printing of political opinions in union periodicals. Contributions may of course still be collected from union members as individuals.

Other provisions. To obtain the benefits of existing law (e.g., certification as bargaining agent) a union must file financial data, and its officials must submit affidavits specifying that they are not communists. Upon employers a new privilege of "free speech" is conferred, intended to make it more difficult to charge employers with antiunion propaganda. The act also makes a number of administrative changes. The National Labor Relations Board (originally established by the Wagner Act) is converted from an administrative agency for holding plant elections into a tribunal for hearing complaints. Finally, the law establishes a Joint Congressional Committee on Labor-Management Relations composed of seven members of each house;

the group is empowered to study the working of this very complicated ar highly experimental statute, and—if necessary—to recommend future amen ments.

RESTRICTIVE PRACTICES OF SOME LABOR ORGANIZATIONS

The establishment of the Joint Congressional Committee to study th working of the Taft-Hartley Act, as well as the frankly experimental an even contradictory nature of some of its provisions, gave strong support t the view that the legal framework of collective bargaining had not y reached its final form. The re-election of President Truman and of a Dem cratic Congress in 1948 made further amendment certain, whether by mod fication or by outright repeal of the Taft-Hartley Act.

It is an undoubted fact that twelve years' operation of the Wagne Act was accompanied by an immense extension of the field of unionizatio and growth in power and importance of union leadership. The labor legis lation of the New Deal curtailed time-honored rights and privileges of busi ness owners and managers, and gave organized labor unprecedented posi tion and power in our national economy. But this growth in the bargainin power of labor was accompanied by the spread of restrictive practice among some unions and in certain industries. In partial explanation of th current of opinion which produced the Taft-Hartley Act, certain feature of the darker side of the labor scene deserve notice.

The abuse of power by labor unions arouses at least as much resent ment as the abuse of power by corporations and cartels, a condition intensi fied no doubt by the fact that union abuses are less easily disguised. The practice of racketeering and gangsterism by some who call themselves labor leaders, and the use of monopoly controls by otherwise highly respected unions, are so commonplace as frequently to pass without comment. Failure to hold elections, levying of exorbitant dues, denial of membership on grounds of race or personal prejudice, resistance to technological innova tion, artificial limitation of the amount of work performed—such abuses are not characteristic of the labor movement as a whole, but they are suffi ciently common to have aroused widespread criticism. As specific examples may be cited attempts by the American Federation of Musicians to force employment of unneeded workers, the restrictions upon the type and amount of work to be performed by each individual worker which are common in the motion-picture and construction industries, similar restric tions upon the amount of work performed by railroad workers (the so-called featherbed rules), and the shakedown

trucking firms by locals of the International Brotherhood of Teamsters. The labor movement as a whole has been reproached for not conducting a vigorous campaign against such evils in its midst.

Although such abuses partly motivated the legislation which emerged as the Taft-Hartley Act, the act attacked them only indirectly. To the extent that they depend upon monopoly power, abuses may possibly be diminished through the impossibility of enforcing closed-shop contracts or the control of union dues. Yet the construction workers and the teamsters in the past have found ways of enforcing the closed shop which did not depend upon any appeal to the courts. If the Taft-Hartley law scarcely touched problems of this order, its sponsors could claim that they were concerned with regulating labor relations in general, and not with the restrictive practices of this or that particular union.

The abuse of power can be prevented by the destruction of the power itself. The repeal of all New Deal labor legislation and the return to the legislative, administrative and judicial attitudes of two decades ago might, by weakening labor unions as a whole, have cured some of the abuses mentioned. But such a remedy would fall upon the just and the unjust alike, and few will be found to claim that the result would be worth the price. We should remember, too, that in labor disputes the abuses are not all on one side.

An alternative is to legislate against specific evils. A start in this direction has been made through the passage of the Hobbs antiracketeering law and of the Lea Act which makes it illegal to force an employer to hire unneeded workers. These two pieces of legislation are in process of being tested in the courts, by prosecution in the one case of the teamsters' and in the other of the musicians' union. Legislative attempts to curb labor-union abuses nevertheless face many obstacles. One such obstacle is the difficulty in securing passage of such legislation in the face of opposition by the labor movement as a whole. This solid opposition is due to a fear that such bills, if enacted, might be used for purposes different from those ostensibly advanced; that such legislation, especially if administered by an unfriendly Attorney General, could be used to spearhead an attack upon labor as a whole. The fact that labor has suffered injustice at the hands of the courts in past eras explains, if it does not excuse, this attitude. Another obstacle to reform by legislation is that some of the abuses concern the internal management of individual labor unions. It is hard to see, for instance, how democratic control of officials by the membership of a union can be secured by congressional enactment. These considerations suggest the need for more widespread education, of union members and officials alike, in the duties

and responsibilities of industrial democracy. Adult education in general and training in industrial relations in particular have lagged far behind the growth in the power of individual labor unions. It is possible that only the mobilization of governmental and private resources for a vast educational campaign in the principles of industrial democracy can secure for labor unions their maximum usefulness to society.

This is not to deny that an equal—or perhaps greater—responsibility rests with business management. If labor sometimes abuses the power which it has obtained almost overnight, and easily loses sight even of its own long-term interests, management has too often failed to accept the Wagner Act as an integral part of our statute law, or to recognize the overwhelming probability that labor unions have come to stay. Many employers are suspicious and confused. Whether such fears are reasonable or not, just as labor fears that the National Association of Manufacturers is out to crush the unions, to drive labor back to the doghouse, and even to destroy democracy itself, so business fears that organized labor is but a conspiracy to rob management of its traditional functions and so-called prerogatives. All these fears create an atmosphere not conducive to progress in industrial relations.

It has been argued that the initiative in breaking the impasse should come from management rather than from labor: First, because the character of the economic and legal weapons used by management when labor was weak explain much of labor's current bitterness; second, because businessmen and personnel directors are still on the whole a better-educated group than labor-union officials, and therefore should be expected to take a somewhat broader and less immediately selfish view of industrial relations than has been common in the past. But it may be that, here too, progress must wait upon the spread of education.

It would be a mistake to conclude that the picture is entirely black. Business management has long applied scientific methods to engineering problems, to accounting, and to selling; it has begun slowly and haltingly, to realize that its relations with its workpeople also call for scientific treatment. The systematic study of personnel problems and the applications of industrial psychology are still in their infancy. On the one hand, business has done great harm to industrial morale by rejecting new ideas (for instance, proposals for an annual wage, or for the introduction of welfare funds) without even studying them. On the other hand, labor-management committees organized upon the initiative of the War Production Board in thousands of enterprises during the war proved that co-operation for greater efficiency was practicable and effective.

Especially would it be unsafe to conclude—for instance, from the large number of industrial disputes which occurred during 1946-47—that labor relations in this country are growing steadily worse. The exceptional frequency and gravity of disputes during this period was due mainly to two causes. One was that the coming of peace released all unions from their wartime no-strike pledges; in a sense, the nation had to work through a backlog of potential disputes which ordinarily would have come to a head at some previous period, but did not do so because of the war. The other cause of strikes was the progressive downward adjustment in the purchasing power of the dollar; by altering the real content of every wage agreement (except for those few agreements geared to the cost of living) such a change in the value of the dollar is a potent cause of industrial strife. The backlog of wartime disputes by now is probably exhausted; the purchasing power of the dollar may cease to decline. Nor should we forget that, even in such a strike-bound year as 1946, approximately one thousand collective agreements were peacefully discussed, revised, and concluded in the United States every week. Only those relatively few negotiations that led to a dispute had news value or caused inconvenience to the public.

CHAPTER SIXTEEN

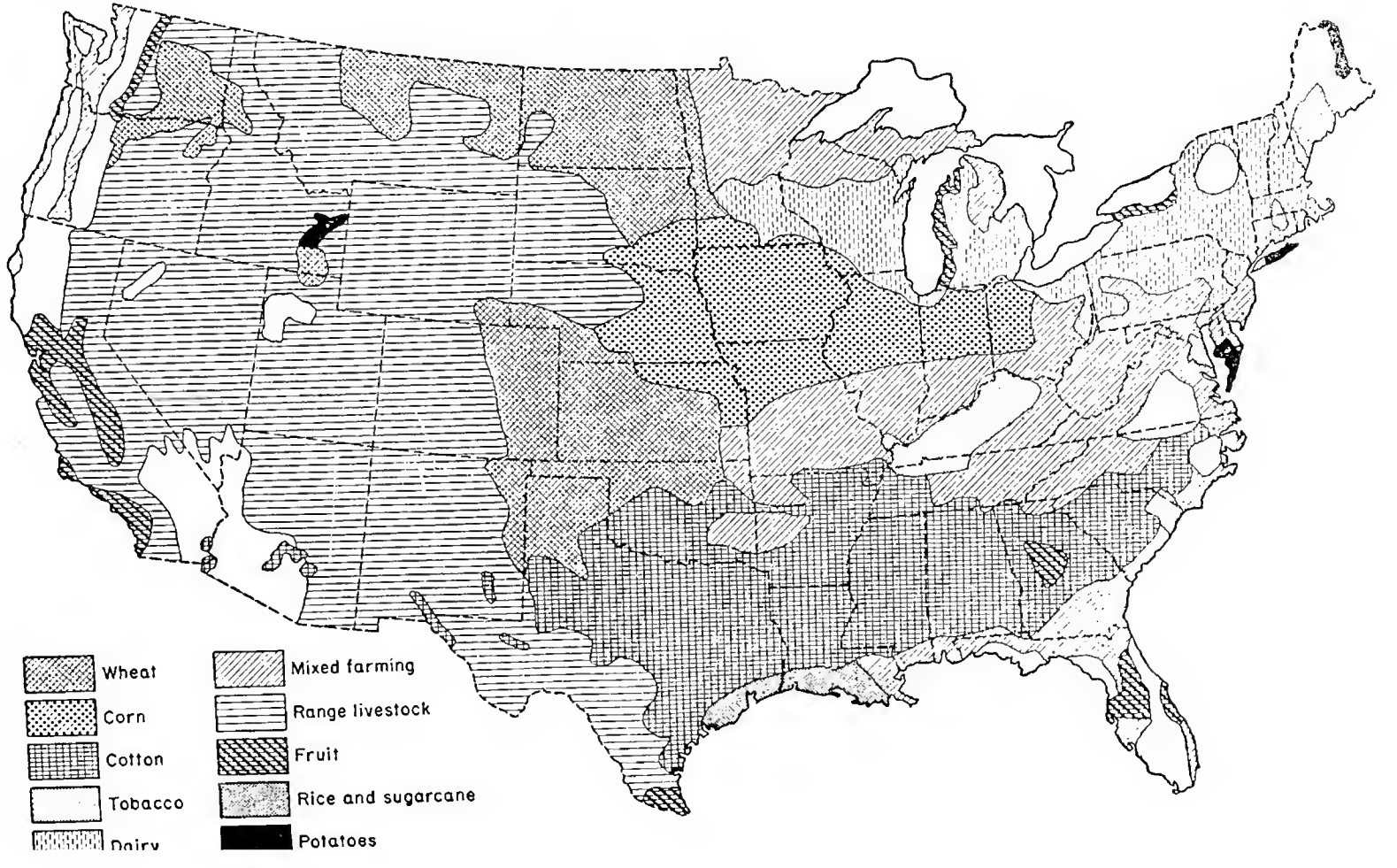
Farmers: production and prices

The chapters in this section are concerned with the welfare and status, roblems and aspirations, of different economic groups within the nation as whole. Why, then, do we single out farmers as a major economic group? he days when a majority of Americans tilled the soil have long since van-hed, yet, even now, about ten million people, or one person in six of the bor force, either operate farms themselves or work for farmers. Farming still a common way of earning a living in the United States.

Major farming regions of the United States are shown in Fig. 22. Re-ions are classified by their principal crop: thus other things besides wheat for instance, oats, dairy products) are produced in the region marked wheat," and so with other regions. Where no single crop predominates, or here subsistence farming prevails, the classification "mixed farming" has en used. Areas not used for farming have been left white. The map clearly ows the wide variation in types of farming, each type conditioned by imate, soil, and distance from market.

It might be thought that a dairy farmer of New England or Wisconsin, cotton farmer of South Carolina or Texas, a tobacco producer of Virginia, grain farmer of the Plains, and a fruitgrower of the Pacific Coast (to men-n only a few varieties of farmers) are so differently situated that it would an error to study them as a single group. Yet they undoubtedly have ny characteristics in common. Most farmers are independent business-n, but each operates upon a relatively small scale. They are more nearly f-sufficient than any other segment of the population; but, insofar as they oduce for the market, most of what they have to sell is raw material, al-st always requiring transportation and often in need of elaborate process-before it reaches the final consumer. Moreover, agriculture is notorious its close and often fatal dependence upon the weather. Production is un-

Figure 22 **MAJOR FARMING REGIONS OF THE UNITED STATES**



certain, and no farmer knows in advance just how much he will harvest, or what he will get for his product. In these ways farming differs from other small-scale enterprises, such as storekeeping or dentistry. We may safely regard farmers as an economic group, distinct from other groups, to the extent that they share—or are inclined to think they share—problems not shared by nonfarmers.

Farmers and their problems bulk larger in the national scene than mere numbers would indicate. They occupy an unparalleled position of respect, and even admiration, in the minds of city dwellers. We all have heard it said that agriculture is "the nation's backbone." Everyone knows that the American who aspires to high public office does well to point with pride to his rural origins. At the very least he must insist upon his love for farm life, and he proves it by being photographed beside a sturdy plow horse. People who dwell in the country are considered to have been spared the corruption of city living. It is often felt, too, that the welfare of those who produce our very food and clothing is in some subtle way a prerequisite of the welfare of the nation at large. Finally, in large measure what the farmer says politically goes. This is because the least populous states, whose inhabitants of course are overrepresented in the Senate, are predominantly rural. Even within such a state as New York, the rural Congressional and Assembly districts tend to be less populous than the urban.

The preferred position of the American farmer in the minds and hearts of his fellow citizens has a long history. Throughout most of the nineteenth century the promise of American life was embodied in the self-reliant men and women who struck out afresh in a rich land and, by dint of hard work, ample living, and minding their own business, got ahead in the world. The independent farmer was the prototype of the successful American, the mainstay of individualism, the guardian of liberty and democracy. "Cultivators of the earth," said Thomas Jefferson, "are the most valuable citizens. They are the most vigorous, the most independent, the most virtuous, and they are tied to their country, and wedded to its liberty and interests, by the most lasting bonds." This thought has been repeated by countless American statesmen.

THE ECONOMIC POSITION OF FARMERS

Farming may be virtuous, but it is not always profitable. Of course mismanagement may bring disaster in any business. Yet we tend to think of agriculture as unusually risky and unprofitable. Certainly farmers as a group would reject the idea that—except for brief wartime booms—they have re-

ceived their "fair share" of this world's goods. What support exists for this opinion?

Let us take the years 1940-41, years in which farming as a whole was more prosperous than it had been for a decade, but was not yet markedly affected by wartime boom conditions. In 1940 thirty million persons, or roughly one-fifth of the population, lived on the nation's six million odd farms. This means, as we have seen, that about one American worker in six earned his living by farming or working for a farmer. Yet fewer than one dollar in ten of the national income went to agriculture. The proportion of the national income received by farmers in various years is shown in Table 11, page 192.

The smaller than average income earned in agriculture can also be shown graphically. Fig. 23 contrasts the distribution of income between farm and nonfarm households[1] for 1941. In that year more than six million farm households had an average income (including allowance for the value of food raised and consumed on the farm itself) of about $1,650. The nation's thirty-nine million nonfarm households, on the other hand, averaged $2,300. The distribution of income for farm and for nonfarm households, shown for each group percentagewise in the chart is, of course, very uneven for both groups. Some farmers are poor, others wealthy; this is true also of nonfarmers. But the tendency is clear for those engaged in agriculture to earn less than those engaged in other occupations. For instance, only 25 per cent of the farm, but 44 per cent of the nonfarm, households had incomes in excess of $2,000.[2]

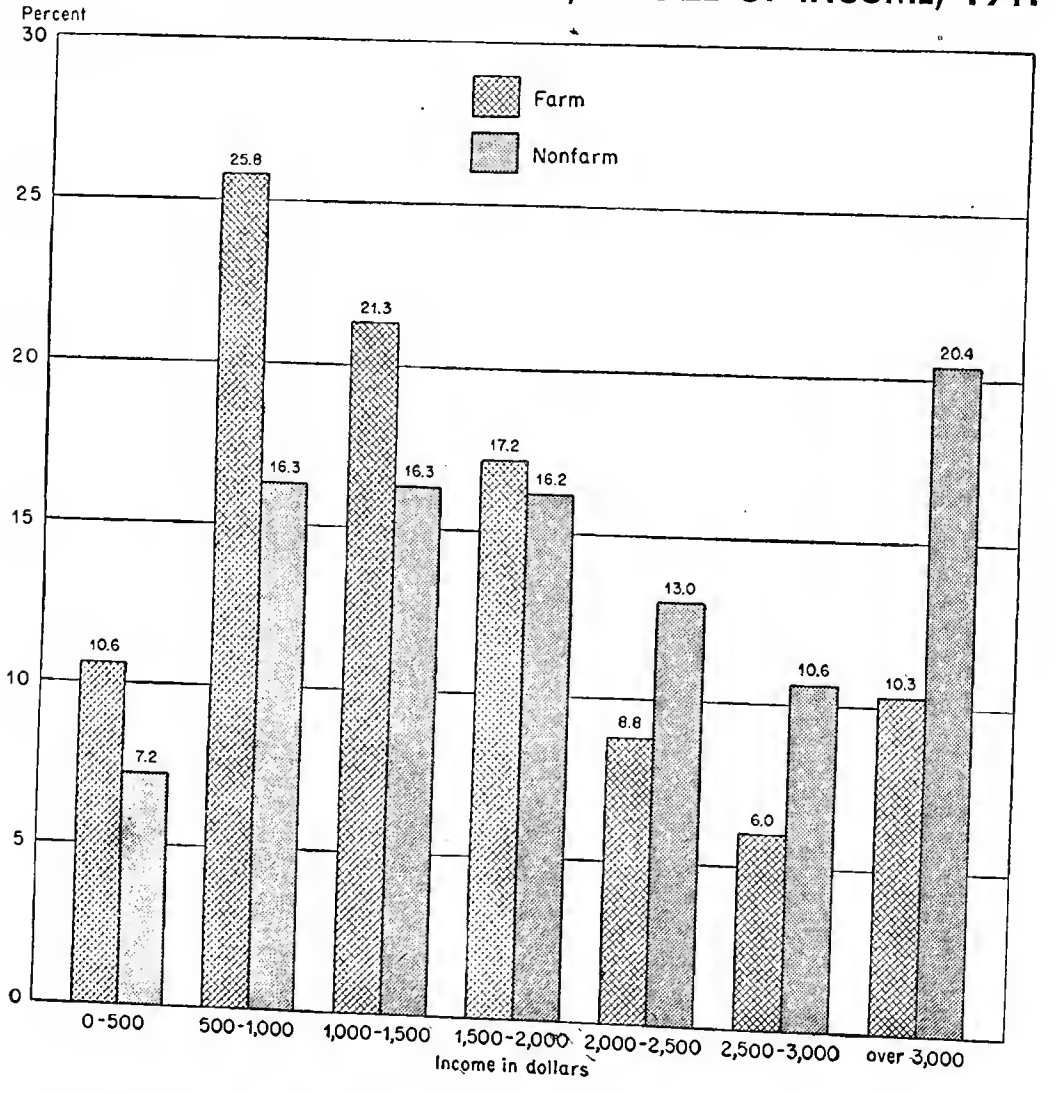
Against this it may be urged that living is cheaper in the country than in the city: if the rural family receives fewer dollars, each dollar will purchase more. It may also be said that the rural poor, raising at least some of their own food, have somewhat better diets than the urban poor. Yet these and similar qualifications are scarcely sufficient to upset the conclusion outlined above concerning the generally inferior economic status of farmers. Moreover, altogether aside from the question of income size, numerous other indicators point to the same conclusion. In 1945, for instance, despite

[1] The term "household" is used here to include both families and individuals living alone.

[2] In 1948 when this was written money incomes generally had risen (and the purchasing power of the dollar had declined) in comparison with 1941, the latest year for which data of the kind quoted in the text were available. The especially sharp rise in farm prices may even have diminished somewhat the differential between farm and nonfarm incomes. But the relationship shown for 1941 is probably more typical than would be one derived for the immediate postwar years.

ten years' pressure for rural electrification, almost half the nation's farmhouses, but only one nonfarm dwelling in twenty-five, lacked electric current. Again three out of four farmhouses, but only one out of nine nonfarm dwellings, lacked a piped water supply.

Figure 23 **PERCENTAGE DISTRIBUTION OF FARM AND NONFARM HOUSEHOLDS, BY SIZE OF INCOME, 1941**



We observed in Chapter 8 the steady and substantial gains in real income and standard of living enjoyed by Americans since the Civil War, and probably since much earlier times. Undoubtedly farmers and farm laborers have shared in these gains, but apparently not to the same extent as other groups. Symptomatic of this laggard tendency is the rural unrest of the eighties and nineties, the failure of farmers to share the prosperity of other groups during the twenties, and the prolonged agricultural depression of

[illegible] quarters of a century, at least, farmers seen [illegible] prolonged periods of depression, punctuated by [illegible] relatively fast temporary prosperity. In detail, such [illegible] specialization. Truck farmers near expanding cities, and [illegible] fruit growers of the Pacific Coast, found a steady market which [illegible] remained unsatisfied. But the producers of staple products [illegible] and cotton growers, the tobacco farmers, and the hog raiser [illegible] too frequently been plagued by surpluses. And when prices fel [illegible] could not fail to express a grievance or hunt for a scapegoat.

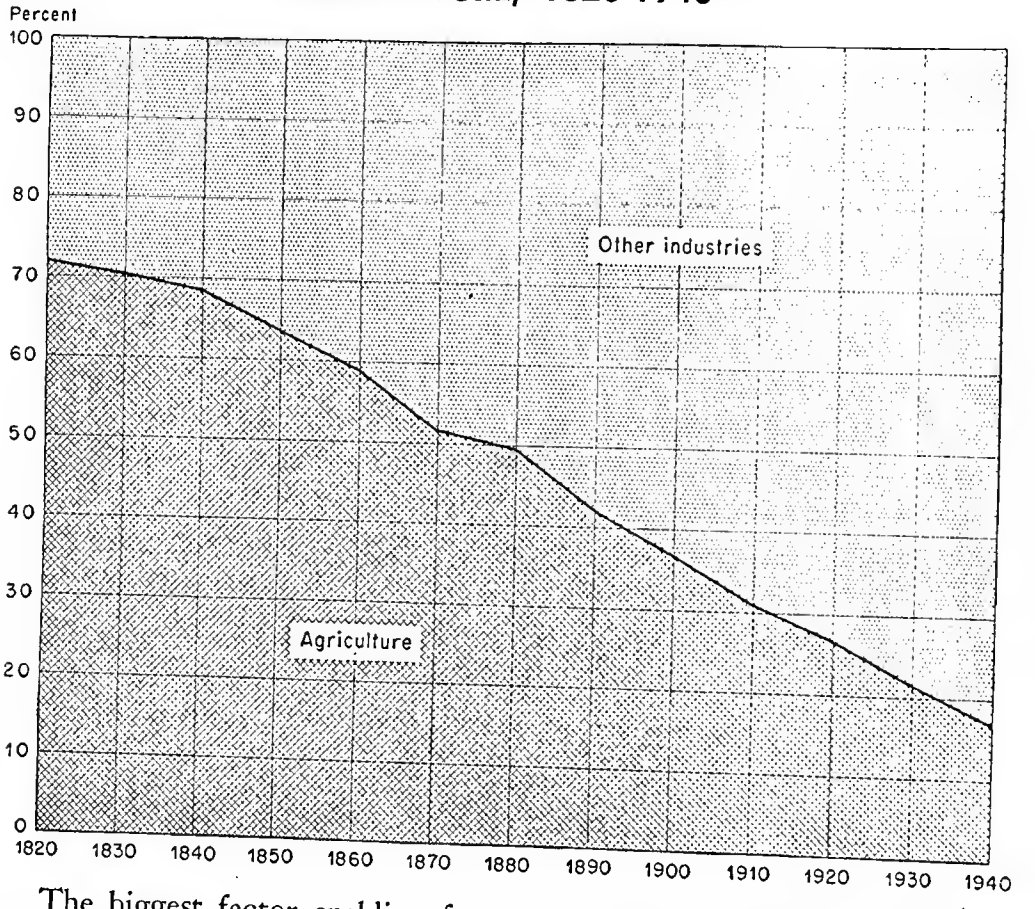
Until the federal government intervened to restrict production and rais prices under the New Deal, no commodities were sold under condition more closely approximating "perfect competition" than were agricultur staples. The price at which the American farmer sold his wheat or cotton his tobacco or hogs was fixed on distant markets. United States cotto competed with Egyptian, United States hogs with South American. Wh were American farmers, who prior to 1865 had been so successful in sellin their product abroad, later squeezed out of foreign markets? Why coul not American consumers, who have doubled in numbers during the pa half century, take everything domestic farmers could produce? Why hav farmers who could not profitably sell their crops demanded—and received federal aid to the extent of over a billion dollars a year?

HOW MANY FARMERS DOES AMERICA NEED?

The proportion of the available labor force engaged in farming pro ably has been declining ever since the foundation of the republic. When t census of 1820 was taken, almost three persons out of four made a livi by farming; in 1880 half the nation's workers were either farmers or fa laborers, by 1940 only one sixth of the labor force was engaged in agric ture (fig. 249). While *total* population was increasing, the actual numb of farmers and farm laborers in the United States also increased (thou less rapidly) until the end of World War I; since that time an actual duction in the farm labor force has occurred. The truth is that we have m aged to produce the agricultural materials, the foods and fibers, for use home or for export with the help of a continually declining fraction of manpower resources, and we have managed to do this, since World Wa actually with fewer and fewer workers. Or, to put the matter the ot way round, opportunities to make a living in agriculture have become r tively more and more restricted in the United States, and since World W have declined absolutely.

Why has farming steadily become less important as a source of livelihood in the United States? The story is long and complicated, and includes the important fact that American producers have found it to their advantage to engage in other lines of production. Directly with regard to conditions in agriculture, three major factors go far toward an explanation: increasing productivity, declining exports, inelastic demand at home.

Figure 24 **PERCENTAGE OF THE LABOR FORCE ENGAGED IN AGRICULTURE, 1820-1940**



The biggest factor enabling farmers to produce more has of course been the introduction of mechanical power. Not only could a single family plow and harvest a larger number of acres by tractor; they no longer needed to grow feed for horses, or at least for as many horses. The number of horses on farms fell from twenty-one million in 1919 to eleven million in 1939. The saving in feed represents the produce of over twenty million acres and some hundreds of thousands of workers. These acres and this labor could now be turned to production for the market. Again, the introduction of new and more productive strains of plants and animals, and the spread of knowledge concerning the use of fertilizer and improved cultural

practices, have served to expand agricultural output. Since 1870 these changes have multiplied output per person engaged in farming about three times. Yet the market for these vast potential harvests and animal herds did not expand correspondingly. Indeed, it could not possibly be expected to do so.

THE DECLINE OF AGRICULTURAL EXPORTS

American farmers turned their eyes toward the lucrative European markets even in colonial times. Much later, with the opening of transportation routes and the settlement of the West, grains and livestock products were added to the traditional exports, cotton and tobacco. Yet by 1900 farm exports had started to shrink in importance. In the middle years of the nineteenth century farmers produced up to four-fifths of all American exports. Between 1900 and the outbreak of World War I, half our exports were farm products; between the two World Wars, one-third or less of what we sold abroad came from farms. What had happened?

As the nation became more and more highly industrialized, two important changes occurred in our economy. In the first place, the new manufactures came to occupy a larger and larger place in the list of exports; farm products were not exactly crowded out, but for various reasons manufactures became easier than farm products to sell in large volume abroad. In the second place—really another aspect of the same condition—factories tended to drain away the rural labor supply, so that farmers found it more and more difficult to employ the kind of labor they needed at the time they needed it.

Finally, American farm exports were hit by two other developments overseas. New producers, such as Egyptian cotton growers and Argentine meat producers, set up in business and began to undercut American farmers in European markets. And, as the mid-nineteenth-century enthusiasm for free-trade principles began to wane, European consuming countries started to protect their agriculture with tariff duties against competition from imported produce, American or other. The importance of agriculture and its problems to our foreign trade policies will be shown in Chapter 29.

THE INELASTIC DEMAND FOR AGRICULTURAL PRODUCTS

There remained the domestic market, destined to be, in peacetime at least, the main outlet for farm produce. Yet here, too, limitations began to be important. Substitutes developed: cotton and wool were replaced in part

by rayon and other fibers derived from woodpulp. And the expansion in output per worker, already noted, ran up against the "inelastic demand" for farm products. Consumption, that is to say, does not respond when lower costs of production lead to a cheapening of the product. This situation is to be explained, simply but not inaccurately, in terms of the fixed size and limited capacity of the human stomach. Neither cheaper food, nor more to spend on the part of the city dweller, could appreciably increase food consumption in terms of pounds or calories. In fact, the trend is in the opposite direction. As a result of better-heated homes and less sheer physical labor, Americans consume about 10 per cent fewer calories per capita than they did in 1900. Some further substitution of labor-expensive dairy products and fruits for staple foodstuffs may still be in prospect. But, by and large, every increase in output per worker in agriculture diminishes the scope for employment in farming, and releases farmers and farmworkers (or their children) for other occupations.

The steady long-term decline in the percentage of the labor force engaged in agriculture is therefore a tribute to the productivity of farmers; it is also the obverse of the rise of the United States as a great manufacturing nation. Because fewer men were needed to till the soil, more and more could be spared, not only to man the railroads, power plants, and factories of the new industrial age, but to fill the rising professions and white-collar occupations whose services the community could now afford to buy. The surprisingly large number of city folk "born on a farm" is partly a result of the large size of farm families; it is a reflection also of the relatively larger number of persons engaged in agriculture a generation ago than today.

THE INSECURITIES OF FARMERS

Every industrialized country has seen the proportion of farm folk in the population decline. It does not follow, however, that this transition has usually come about easily or smoothly. In the United States the adjustment has been troublesome, sometimes painful; for more than two decades before World War II agriculture was called a "sick industry." To see why agriculture was sick—and may become so again—we must consider some other aspects of commercial farming in the United States.

Larger numbers of small-scale subsistence farmers, especially in the South, are scarcely affected by market fluctuations. They eke out a living, consuming what they produce, seldom seeing much in the way of cash receipts. These "farmers" represent a condition of rural poverty, often accentuated by share-cropping tenancy, about which something will be said

later in this chapter. Here we are concerned rather with the changing fortunes of commercial farmers who produce one or a very few staple products for cash sale. The income of the individual farmer depends partly upon how large a crop, or how much milk or meat, he markets during the year.

It is true that the hardy but unfortunate pioneers who plowed up the "dustbowl" of western Kansas and Oklahoma during the first three decades of the century were wiped out by crop failures during the thirties because they had pushed the frontier of cultivation into an area where rainfall is not regularly adequate for tillage. Yet the success or failure of the average farmer over the years depends less upon his success in raising crops than upon the prices he gets for what he sells. His cash expenses are relatively fixed from one year to another: rent or mortgage payments, hired labor, seeds, fertilizer, gasoline. A rise of a few cents a pound or a bushel may double his profit; a corresponding fall may put him in the red.

Since about 1880, as we have seen, the decline in exports and the rapid rise in agricultural productivity, coupled with the inelastic demand for farm products, have tended to make much American farming relatively unprofitable. At least, complaints have been loud; and the number of farmers failed to increase, and then started to diminish. Some areas went ahead, of course, and others suffered partial or complete eclipse. The opening of the Great Plains wiped out commercial grain production in New England; cotton growing moved southwest toward Texas; California first produced wheat, and then developed a citrus industry. Yet a downward adjustment in the scale of farming in the United States was nonetheless in progress.

This gradual deflation of agriculture, and the discouragement of individual farmers which it implied, was perhaps inevitable in any society becoming highly industrialized. The downward trend, however, was sharply reversed by the events of two world wars. During, and especially after, the period of hostilities a hungry Europe, its own agriculture temporarily paralyzed by lack of fertilizer and loss of livestock, clamored to be fed. As this is written, American farmers are still prospering as a result of World War II, of which more shortly. Meanwhile let us examine the consequences of World War I more closely.

EFFECTS OF WORLD WAR I ON FARMERS

During the decade prior to World War I it looked as if farmers would adjust themselves without too much trouble to the loss of export markets and the potential saturation of domestic demand. Our urban population was

then increasing more rapidly than improved farm acreages. Moreover, manufacturing industry developed apace. There was also a large migration from farms, suggesting that many rural people believed life to be more attractive in the cities. But this movement made things better for those who remained on the land. Indeed, had the farm population continued to decline, and had this decline matched the continuing rise in agricultural productivity, the farm surpluses of the twenties and thirties might never have been experienced. All in all, the decade prior to World War I was a period of moderate prosperity for most commercial farmers. Later it came to be called, with a nostalgic sigh, "the golden age of American agriculture."

The outbreak of war in 1914 pulled our farmers violently out of these grooves of adjustment. As was to happen again as a result of World War II, the Allies' need for food and materials mounted rapidly. Our relative nearness to Europe gave us an advantage in supplying the belligerents, and neutral countries turned to us for supplies they could not readily obtain elsewhere. Once again, American farmers did a rushing foreign business. Our own entry into the war in 1917 gave further impetus to the boom. Crop prices skyrocketed, and with them also mounted the cash incomes of farmers. Spurred by these soaring prices and by patriotic appeals to grow more and more, farmers expanded their productive plant and equipment. Total farm acreage was about 9 per cent greater in 1920 than in 1910; land in wheat rose from 46,000,000 acres in 1917 to 73,000,000 in 1919.

To farmers it looked as if the millennium had arrived. On the average, values of farm land rose 70 per cent during 1913-20. This not only made farmers feel more affluent; it enabled them to finance the expansion of their productive equipment by borrowing. During this period farm mortgage debt more than doubled. High farm exports did not cease with the armistice in the late fall of 1918, for European agriculture was in temporary eclipse, and relief needs were extensive. But a rude awakening came within two years of the end of hostilities. Some European nations were again producing; others could not afford to buy; all were affected by a wave of nationalistic feeling which led to drastic measures to exclude foreign farm products. Prices and land values collapsed, leaving American farmers stranded on their mountainous capacity to produce. And they were loaded down as never before by debts and taxes.

AGRICULTURAL DEPRESSION OF THE 1920's

The year 1921 brought falling prices and bankruptcies to industry as well as agriculture. Industrial recovery was rapid, and the decade of the

twenties is remembered as a period of extraordinary industrial prosperity. But the masses of our farmers remained stranded. All through the 1920's there were loud cries of distress from rural areas, and growing demands that the government do something to "save agriculture." And, as the grip of depression tightened after 1929, millions of farmers became desperate. The wholesale abandonment of farms in the western plains as a result of drought in such a year as 1934 served only to dramatize the general unprofitableness of farming, even when crops were good.

The causes of the long-term decline in American farming have already been examined. There remains the question why, at times when employment opportunities in industry were good, as they were during the twenties, more people did not leave farming for other occupations? When too many people are trying to make a living in any line of business, few of them will be successful. But once a sufficient number give up what they are doing as a bad job, and resolve to try something else, the "overproduction" comes to an end, and those who remain can make a living.

Something of the sort did actually occur during the twenties. One million fewer persons were living on farms in 1930 than in 1920, and in fact the decade saw a substantial migration from farms to urban areas, especially industrial cities. Shifts also occurred in the activities of farmers: grains and other staples gave way to dairying and fruit farming, which showed somewhat greater promise.

Yet, whether we blame the false hopes engendered by the agrarian boom of World War I, or the simple stubbornness of the individual cultivator, we must recognize that, by the thirties, the farm situation was back where it had been in the eighties and nineties of the last century: increasing productivity, together with inelastic demand, had forced farm prices down and wiped out farmers' incomes. In part the wartime boom was undoubtedly to blame, for it had encouraged the development of farming areas, especially in the western plains, which could not permanently compete. It also was responsible in large part for excessive mortgages on owner-operated farms—mortgages whose cost did not seem so heavy in the light of farm prices and incomes in 1920 but which meant near-bankruptcy in 1930.

OCCUPATIONAL IMMOBILITY OF FARMERS

Yet peculiar obstacles exist which prevent the farmer from taking up some other occupation when times remain persistently bad. These obstacles can be summed up in the term "immobility." Some of the factors which

impair the mobility of labor have already been discussed in Chapter 14, but very special obstacles surround the farmer who wants to give up farming for something that will pay better. He is accustomed to working in the open air; his skills do not have much if any value outside farming; he often has a substantial investment in the farm, even if it is mortgaged; he reflects that the farm assures his minimum needs for food and shelter, even if he "makes no money" out of farming. In these circumstances he and his family continue to work the farm, perhaps year after year, for an hourly reward which no urban wage earner would dream of accepting.

Possibly his children will look elsewhere, may migrate to some near-by city. But the farmer himself, during his lifetime, is bound to the soil by ties which are in no way weaker for being irrational. Not even the foreclosure of a mortgage can be relied upon to force the farmer out of farming. In taking title to the farm the mortgagor's most hopeful plan will surely be to rent it back to the operator as tenant. While the weight of a mortgage is often discouraging to the farmer and has sometimes forced him into unsound methods of farming as a way of raising immediately needed cash, the effects of foreclosure usually have been limited to changes of ownership which left the same people operating the farms.

The occupational immobility of farmers is enhanced by isolation and by lack of knowledge of alternative opportunities. For this, our failure, until very recently, to set up an effective system of employment exchanges is partly to blame. The casual way in which such services have been administered by individual states has greatly diminished their value in reducing occupational immobility. Ignorance of other opportunities bears especially heavily upon the farm population because of the relatively large size of farm families. Sons of farmers would still have to seek urban (or at least nonagricultural) employment in large numbers, even if opportunities in farming itself were not becoming more limited. The problem is further aggravated by restrictions on entry into some urban occupations, restrictions such as apprenticeship requirements, municipal licensing or excessive labor-union initiation fees.

In sum, the transfer of labor and enterprise from farming to other occupations, made necessary by the decline in farm exports and the increase in the productivity of agriculture itself, is no easy matter to accomplish. Sharply checked by boom conditions during World War I, migration to other occupations made some progress during the twenties, stimulated by the contrast between industrial prosperity and agricultural depression. The industrial depression of the thirties reversed the trend, sending unemployed city folk back to the farms. The effects of renewed boom conditions in agri-

culture during World War II upon the number of farmers, the size of their plant and their indebtedness, have yet to be measured, but they seem likely to have still further delayed the downward adjustment in the scale of American agriculture.

THE FARMER TURNS TO WASHINGTON

The grievances of farmers have always found ready political expression, and their actual or threatened use of the ballot has often brought them real benefits. In the eighties and nineties of the last century they demanded and got federal control of railroad rates, and statutes (by no means wholly effective) against their enemies, the trusts. On the other hand, farmers have been far less successful, at least since the Civil War, in resisting high import duties on industrial products than insisting upon the inclusion in tariff schedules of those few items (e.g., wool, sugar) with respect to which they themselves have felt the competition of imports. The demand for direct government aid to farming, usually in the form of a proposal that government buy up "surpluses," came soon after the boom of World War I had collapsed. This idea was not immediately accepted; not until the advent of the New Deal did farmers succeed in obtaining regular appropriations from the United States Treasury to supplement their incomes. So solid politically was the success then achieved that few policies now seem to have such firm bipartisan support as that of federal subsidies to agriculture.

We already have mentioned the strength of agrarian interests in American political affairs—a strength that some people consider grossly disproportionate to the number and economic significance of farmers. There are several reasons for this. For one thing, in our legislative bodies the farm areas have a preferred position. The Senate, as everyone knows, includes two members from each state regardless of population. Thus the ten Senators from Iowa, Kansas, Nebraska, and the Dakotas (all primarily agricultural states) represent less than one-sixth as many people as do the same number of Senators from New York, Massachusetts, Pennsylvania, Illinois, and Ohio (which are principally industrial). In the most powerful of our legislative bodies the agricultural states, despite their relative lack of population, are the peers of the industrial states. Furthermore, Western Senators are sometimes in the highly strategic position of being able to determine partisan issues by swinging their votes in support either of Southern Democrats or of Eastern Republicans. Hence a "farm bloc" may hold the balance of power in the Senate.

THE POLITICAL STRENGTH OF FARMERS

Even more important in mobilizing political support is the widespread sentiment that agriculture and the farmer represent those qualities primarily responsible for the nation's greatness. We have already noted that the presidential candidate who has sprung from the soil already possesses a great asset. Our folklore supports the notion that agriculture is the mainstay of individualism and the keystone of all industry. Thus are symbols of pioneer days refurbished in order to prove that we have not forgotten the spirit of early America. This appeal to tradition makes it easier to rally support for proposals to aid farmers than it would be to win backing for programs in behalf of shopkeepers or wage earners. The city politician and the newspaper editor may bitterly oppose appropriations for farm aid. But they cannot afford to denounce publicly political pressure by farmers as "sinister," "selfish," or "un-American." That would offend the tradition too deeply. On the other hand, the agrarian spokesman can count on applause when he pleads for "horny-handed men of the soil," or when he flays the "Wall Street octopus," the "monopolistic labor unions," and the "piratical middlemen." Given time, all this may change as our urban civilization matures. But it still is vital.

Commercial farmers too—like manufacturers, veterans, labor unionists, and others—are represented by vigilant political pressure groups. They are organized along crop lines, by counties and states, regionally and nationally. The poorer farmers and agricultural laborers, however, are far less effectively represented by lobbies, although in recent years this has become less true of poorer farm operators in some regions. Most influential of the agrarian political organizations are the Farm Bureau Federation, the National Grange, and the Farmers' Union. From headquarters in Washington they establish contacts with Congressmen and government officials. They lobby vigorously for laws favorable to their members and watch carefully all government activities that touch farmers. In this they resemble other lobbies. How far pressure groups are a necessary part of democratic government, and beyond what point (if any) their activities become antisocial, are questions into which we cannot enter here.

As already indicated, the idea of special aid for agriculture is accepted by the American public partly on the basis of the superiority of the farmer's way of life, if not indeed of his superior virtue. We should note, however, that in justifying so radical a departure as direct appropriations for farm aid, additional arguments were marshaled. One pointed out the low

income status and near-insolvency of many farmers. Another was that the tariff on industrial products, which was thought not only to raise farmer's living costs but to reduce the foreigner's ability to buy farm products, entitled farmers to some compensating advantage. Still another argued that the antimonopoly laws had not really restored competition among industrialists, or prevented some large-scale purchasers of farm products (e.g., tobacco, cottonseed) from maintaining a bargaining advantage. The notion that farm aid was in some degree a compensation for favors conferred on industry was particularly strong at the time of the almost simultaneous passage, in the summer of 1933, of the National Industrial Recovery Act and the first Agricultural Adjustment Act.

THE ADVENT OF FEDERAL AID TO FARMERS

The first substantial federal aid to agriculture was voted by Congress in 1929. The Federal Farm Board was organized with an appropriation of half a billion dollars (a vast sum for that time) in order to stabilize the prices of cotton and wheat. It was, however, quite unable to prevent the prices in question from falling far below the planned level. Its main effect, indeed, seems to have been to encourage farmers to plant larger acreages, and to produce more goods to sell at the assumedly stabilized prices. The Farm Board was chiefly important as a practical (and very expensive) demonstration that any program to guarantee farmers a minimum price for their crops, if its cost is to be within reason, must control the *size* of such crops. The experience taught a lesson learned by every successful monopolist: i.e., that restriction of output is a necessary condition for effective maintenance of prices.

Therefore, production control occupied a prominent place in the Agricultural Adjustment Act of 1933, a much more sweeping measure passed by Congress in an atmosphere of rural desperation, farmers' strikes, and disruptions of mortgage-foreclosure sales. Although the 1933 legislation was emergency in character, and much modified by later amendment, we may safely say the principle it represented now has become solidly grounded in public policy. The 1933 act set as the goal a level of "parity prices" for farm products, i.e., prices high enough to bear the same relation to industrial prices as in 1909-14.

Just why the relation between farm and other prices in this particular five-year period should have been taken as the "parity" standard is not very clear. The official view was that agricultural and industrial production and prices were well balanced in that base period, and that it provided an

equitable goal for an attempt to raise farm prices. (For tobacco and potatoes a base period 1919-29 was selected.) As a matter of record, prices of most farm products were higher in 1909-14 in relation to industrial prices than at any other time in the nation's history. In 1936 the objective of "income parity" was substituted for that of "price parity"; i.e., farm prices were to be raised to such a level as would re-establish "the ratio between the purchasing power of the net income per person on farms and that of the income per person not on farms, that prevailed during the five-year period August 1909 to July 1914." The announced objective of the farm programs is therefore to make certain the average standard of living on farms rises at least as rapidly as that of the nonfarm population.

"NEW DEAL" BENEFITS TO AGRICULTURE

The original Agricultural Adjustment program applied to the following "basic crops": wheat, cotton, corn, hogs, tobacco, rice and dairy products. Later, under political pressure, the list was extended to include barley, rye, flax, grain sorghums, cattle, peanuts, sugar beets and sugar cane, and potatoes. The Secretary of Agriculture was authorized to make cash "benefit payments" to farmers willing to reduce their acreage in the case of crops, or quantity of production in the case of other products. Money for benefit payments was obtained from a "processing tax" levied on the marketing of the "basic" commodities. Thus the mistake of the Farm Board was avoided: producers were to be paid for producing *less*, not encouraged to produce *more*.

Yet this obvious aim to restrict production damaged the popularity of the program—especially among nonfarm groups, but also with some farmers—from the start. It was obvious also that if the plan were to achieve its objectives it had to make sure that surpluses were prevented from appearing. Control of acreage was soon seen to be a very inefficient way of limiting production; the new hybrid corn, for instance, produced a larger total crop, even though acreage was reduced. Moreover, the Supreme Court found that the processing taxes, by which the plan was financed, did not fall within the scope of taxation for the general welfare. For all these reasons the legislation was drastically revised in 1936, when it began to assume its present form with the passage of the Soil Conservation and Domestic Allotment Act. First, for the processing taxes was substituted a direct appropriation from the United States Treasury. Second, marketing agreements limiting the amount to be sold were substituted for acreage control in many

cases. Third, to the purely negative philosophy of production limitation there was now added an attempt to tie the program up with soil conservation. For the most part these principles have survived in later legislation.

THE AGRICULTURAL ADJUSTMENT ACT OF 1938

Current federal aid to agriculture is based largely upon the Agricultural Adjustment Act of 1938. With the enactment of this legislation the program assumed more or less permanent form, various unworkable features of previous plans were eliminated, and the entire project given an apparently secure constitutional status. Essentially farm aid today consists of substantial appropriations by Congress to supplement farm incomes. To a minor extent disbursements take the form of benefit payments made, not in return for acreage reduction as such, but for the adoption of prescribed methods of soil conservation. Thus clover and certain other crops, instead of depleting the soil of plant nutrients, will, if plowed under, actually contribute to the soil nitrogen taken from the air. The use of such soil-building crops is admittedly good agricultural practice. However, critics have alleged that soil conservation was introduced only in order to make Agricultural Adjustment appear less wasteful of public funds, and that conservation objectives could have been achieved more effectively if separated from other farm programs.

However that may be, most of the farm appropriations in recent years have been used for a much more direct form of subsidy—the support of farm prices by means of nonrecourse loans. Originally conceived as a means of temporarily holding excess supplies off the market, such loans have become a convenient way of guaranteeing to farmers a specified minimum price for their products. A farmer can borrow at (say) 90 per cent of parity price, pledging his crop for the loan. If the market price rises above the loan value, he may sell the crop and pocket the difference. If the market price remains below 90 per cent of parity, then (taking advantage of the nonrecourse feature) the farmer may turn in the crop in fulfillment of his debt; the loss is then borne by the Department of Agriculture. Thus, in effect, the government pays just so much subsidy as is necessary to guarantee a given price—in the case cited, 90 per cent of parity.

The act of 1938 attempted to guard against the danger that these subsidies might lead to a breakdown of the plan through increased output and correspondingly expanded demands upon the Federal Treasury. One provision continued the soil-conservation features, somewhat reducing acreage in staple crops. Another, and more important, provision extended and tightened

up the system of *marketing quotas*. Such quotas, to become compulsory when voted upon favorably by two-thirds of the producers, were applied to cotton, tobacco, rice, and wheat. In the case of the somewhat less stringent *marketing agreements*, applied to many other crops, adherence is not compulsory, but the nonparticipant is denied major benefits of the program.

By the time the 1938 act became law, production controls had been so perfected for the majority of crops that any repetition of the Farm Board experience seemed a remote possibility. Yet in 1939 and 1940 surpluses of cotton and wheat were still a problem, and the Department of Agriculture was driven to subsidize the export of both commodities. Some surplus foodstuffs were also distributed domestically through relief channels by means of "food-stamp" plans.

AGRICULTURAL ADJUSTMENT SINCE WORLD WAR II

With the introduction in 1941 of lend-lease, followed by American participation in the war, the farm situation was of course turned upside down. Vast new agricultural exports became necessary, and large quantities of farm products found new domestic uses, for example, in making alcohol for the munitions program. Any risk of overproduction was further removed for the duration by the shortages of machinery and of farm labor, caused by the drift to war factories and by the draft. The Department of Agriculture therefore removed all restrictions on production, and at first confined itself to urging the planting of those crops which seemed to be especially short. Prices rose to parity levels or above, and the need for official measures of support disappeared.

Meanwhile, under wartime legislation, and subject to the availability of funds, the Department of Agriculture was committed to the support of the prices of virtually all agricultural products at a minimum level of 90 per cent of parity for a period of two years following the official end of hostilities, i.e., until December 31, 1948. As this is written (mid-1948) continued high levels of domestic purchasing power, and large exports to Europe, have prolonged the wartime shortage of farm products, so that substantial operations by government in support of prices have not been necessary, except in the case of potatoes. Not an important export commodity, and no longer used for wartime alcohol production, potatoes were the first major crop to develop a postwar surplus. As a consequence, support of potato prices cost the Treasury $100,000,000 during 1945 and 1946. This experience has led to doubts as to whether, in the event a sudden weakening should occur in the current high level of demand for farm products, production controls on

other crops can be reimposed quickly enough to avoid a sharp rise in the cost of Agricultural Adjustment.

Superficially, at least, the effect of World War II has resembled that of World War I. Net income of farm operators, which touched $9,000,000,000 in 1919 and slumped to less than $2,000,000,000 in 1932, averaged $4,000,000,000 to $5,000,000,000 during the years preceding Pearl Harbor. Since then farm income has skyrocketed to $13,000,000,000 in 1945 and $16,700,000,000 in 1947. Since commercial farming, especially, is much more highly mechanized than after World War I, the total number of workers in agriculture (farmers and hired labor) is actually less than in 1939. However, the productive capacity of the farmer's plant has been considerably expanded as a result of the war boom—in spite of construction difficulties and some inability to get desired machinery. The value of farms has risen, particularly in the Middle West, but there has apparently been no expansion in mortgage debt such as occurred during and after World War I. To the individual farmer, the main difference between the situation today and that of twenty-five years ago is probably the firmness with which the principle of government price-fixing of farm products has become embedded in public policy. Whatever the per cent of parity at which Congress eventually decides farm prices can be and will be supported, a floor now exists to help farmers against the disappearance of the export market and of inflated domestic demands. That production controls will have to be reimposed upon many, if not all, farm products to make such price-fixing effective without emptying the Federal Treasury, seems certain. But the necessary techniques for limiting farm output seem now to be well understood.

THE COST OF FEDERAL AID

As a mere matter of dollars the cost of federal aid to agriculture can be readily computed. It includes all expenditures by the Department of Agriculture, except those made for certain nonfarm purposes such as forestry. Since the passage of the first Agricultural Adjustment Act in 1933 these expenditures have averaged roughly a billion dollars a year, as shown in Table 15. A billion dollars represented some 15 per cent of the pre-World War II federal budget, but amounts to only 2 or 3 per cent of current annual expenditures by the United States Treasury. So much for actual federal expenditures. As a related question, we may ask: How important a source of income to farmers have government payments become? This question is answered roughly by the percentages shown in the right-

Table 15 FEDERAL AID TO AGRICULTURE, 1933-1946

	Expenditures of Department of Agriculture (except for forestry), fiscal years ending June 30	Government payments to farmers as a percentage of net income in agriculture, calendar years
1933	$ 176 millions	3%
1934	775	10
1935	1,071	9
1936	933	6
1937	971	5
1938	854	8
1939	1,228	13
1940	1,559	12
1941	937	7
1942	1,225	5
1943	1,163	4
1944	909	5
1945	762	5
1946	980	5

hand column of the table. It shows the percentage which the sum of all direct cash payments by government to farmers bears to the aggregate net income accruing in agriculture (i.e., including wages earned by hired labor as well as the profits of farm operators). In 1939 as much as thirteen cents of every dollar came from the government; in other years the fraction was less. While a rough guide to the importance of federal aid, these percentages do not reflect accurately its effect upon farm incomes. For one thing, by no means all the expenditures shown in the first column take the form of direct cash benefits to individual farmers; beside the cost of administration, much money is spent by the Department of Agriculture upon research. For another—and this factor causes the percentages given to understate the facts—the percentages do not reflect the effect upon farm incomes of higher market prices due to production control.

But the farm programs also are expensive to the community in a much wider sense. It was shown earlier in this chapter that the number of farmers the nation needs, the number of acres under cultivation and the size of the productive plant whose product can be consumed, have all been declining for decades past. Indeed, to the extent that Agricultural Adjustment involves more or less permanent artificial limitations on production, its policies are themselves a recognition of this fact. The ultimate "adjustment"

required to make agriculture self-supporting is therefore the transfer of a sufficient number of persons out of farming into other occupations. Critics of the farm programs have argued that the effect of present policies is to make it worth while financially for farmers to continue in business, despite the fact that each is allowed to produce (or, more exactly, to sell) no more than his proportionate share of the limited amount of any product that the Department of Agriculture thinks can be sold at traditional price levels. In some cases the efficiency of production is lessened, or crops are allowed to rot; in other cases farmers receive increased but often unwanted leisure. The final outcome, so these critics argue, is to operate each farm somewhat below capacity—to arrange what would be known in industry as organized short-time working. That this may sometimes be the effect seems rather well established. Yet the fear that Agricultural Adjustment would prevent a much-needed decline in the number of farmers does not seem to have been realized. The census of 1940 reported several hundred thousand fewer farmers than did that of 1930, and there is evidence that the number has shrunk further since 1940. Whether the number of persons engaged in farming would have declined further, and the tendency toward farm surpluses been eliminated more rapidly, if agriculture had been left to itself, we cannot know.

THE PROBLEM OF BALANCE AMONG FARM PRODUCTS

A further burden imposed by the farm programs on the community, a burden not reflected in the federal expenditures cited above, relates to the distribution of output among farm products. We have seen that the domestic demand for farm products is inelastic, i.e., comparatively insensitive to changes in prices or in the national income. By and large this assumption is correct. However, the demands for fresh fruits, for vegetables, and for dairy products are probably somewhat less inelastic than are the demands for grains, cotton and tobacco. Moreover, nutrition studies have shown that the American diet is adequate, even among low-income groups, from the viewpoint of calories. They show also, however, that we as a nation, and particularly our poor, consume too much cereals and possibly even meat, and not nearly enough protective foods—fresh fruits and vegetables and dairy products.

The Department of Agriculture has recognized the desirability—indeed, the inevitability—of a shift of farm production away from grains, cotton, and tobacco toward truck crops and dairying. Probably, too, the early production-control programs, which were confined to staple crops such as

wheat, cotton, and tobacco, had the effect of turning the thoughts of many farmers toward vegetables and milk cows, which were not yet subject to control. But as price support was accorded to staple crops, a large proportion of producers of other commodities not yet subsidized have clamored to have the program include their products. Virtually all agricultural products have been included in postwar plans for price support, and hence also for production control. The possibility that declining prices, resulting from more efficient production methods, will encourage expanded consumption of protective foods (i.e., fruits, vegetables, and dairy products) is correspondingly reduced.

How far these criticisms of Agricultural Adjustment are significant during the postwar period depends partly upon what sort of compromise is reached by Congress and the Department of Agriculture between the interest of the farmer in high prices and that of the consumer in low prices. If parity is interpreted so that even the least efficient farmer, situated farthest from the market, is made to live relatively at least as well as farmers in general did prior to World War I—at least as well, that is, as during a period of agricultural prosperity—then the burden on the rest of the community will be heavy. If on the other hand the production of larger quantities of protective foods is stimulated, and if federal expenditures are devoted not only to making farm products yield a high income to the farmer, but also to making them cheap to the consumer then the cost of the farm program will not be so noticeable.

"SUBSISTENCE" FARMING

The farmers so far discussed in this chapter have been primarily *commercial* farmers—that is, farmers who specialize on one or a very few products and sell for cash. These are the farmers of the Farm Bureau, the Grange, and the "farm bloc," the farmers who have been chiefly interested in, and who have chiefly benefited from, Agricultural Adjustment. We have spent most time discussing the problems of commercial farmers, because it is they who produce the bulk of farm products, are politically most important, and receive the lion's share of agricultural appropriations.

Not all farmers are commercial farmers in this sense. In 1940 almost one-third of the six million farms in the United States were classified by the Census Bureau as "subsistence farms." Such a farm, by census definition, is one on which less than half the products are sold, the major portion being used by the farm family itself. The fact that a farm family produces primarily for its own consumption, rather than for sale, is not in itself

proof of poverty. Yet it is easy to show that in practice poverty and subsistence farming go together. For the census also classifies farms by value of products, whether these products are sold or used by the farm family. Of the two million subsistence farms mentioned above, one-half raised less than $300 worth, three-quarters less than $400 worth, of produce during the year 1939. Three out of five of these subsistence farms are to be found below the Mason-Dixon line. The states of Virginia, Kentucky, Tennessee, Alabama, and Mississippi each contain more than one hundred thousand subsistence farms.

Some of these farms are not operated by full-time farmers; in some cases the farmer is elderly and lives mainly on savings or a pension; sometimes some member of the family may work for a neighboring farmer, or bring home wages from a near-by town. But enough farm families attempt every year to live on little more than the $200 of $300 worth of produce, which is all they are able to raise, for farm poverty to be a real problem. Many different circumstances, or combinations of circumstances, are to blame. Ignorance, shiftlessness, lack of capital, worn-out or eroded land—all these contribute. In large measure, though not exclusively, extreme rural poverty is a problem of Southern agriculture. Within the Southern states—again in large measure, though not exclusively—this poverty is associated with the special form of tenancy known as sharecropping. In 1940 there were about 300,000 Negro sharecroppers, and about 240,000 white sharecroppers, in the Southern states. They constitute over one-third of all Southern "tenants."

The sharecropper brings to the farm only his own labor and that of his family. The landlord supplies all other requirements—land (typically forty acres), a cabin, a mule, harness, seed, farm implements. Frequently he also advances credit to meet the food, clothing, and other living costs of the cropper family during the production season. Most croppers work under the strict supervision of the landlord. For their work they usually get half of the grain they produce and are paid or credited with half of the money realized from the sale of cotton and cottonseed. From this share are deducted the credits advanced by the landlord, plus interest that is often excessively high. After these deductions, the cropper may find himself at the end of the season still in debt.

The realization that the benefits of Agricultural Adjustment went almost wholly to commercial farmers, and barely touched the more acute phases of rural poverty, led the New Deal to establish the Resettlement Administration, later known as the Farm Security Administration. Its programs have included loans to enable tenants to buy or to improve their

holdings, advice on farm management, and encouragement of the cooperative purchase of equipment. Camps for migratory farm laborers also have been established. Yet appropriations for such direct aid to the poorest farmers and laborers have been small in comparison with expenditures to benefit commercial farmers.

CONCLUSION

It should be evident that there is no single "farm problem." The commercial farmer looks for a profitable market for his crop. The part-time farmer, who spends much of his time at some other occupation, merely hopes to feed himself. The cultivator, commercial or otherwise, whose holding is too small or whose land is exhausted, needs either more capital or another way to make a living. The sharecropper needs education and a different farming system which will make him independent of his landlord. Every farmer who is dissatisfied needs information about opportunities—for his children if not for himself—outside agriculture.

Just as individual farmers have their own problems, so government must face the issue as to what kind of agriculture it wants for the benefit of the community at large. This is a relatively new issue for the American people. Jefferson was content there should be farmers; he would let them raise what they pleased. We in our own day are neither willing nor able to leave them this freedom. For Congress is committed to subsidizing agriculture—especially commercial agriculture—in order that farm incomes as a whole shall not fall too far below "parity." To prevent benefit payments and price supports from engendering unmanageable crop surpluses—and Treasury deficits—production controls are necessary.

Yet artificial scarcities would merely transfer the cost of maintaining farm incomes from the Treasury to the consumer of farm products. Moreover, urban poverty, as well as rural, is a problem. Diets are deficient in fruits, vegetables, and dairy products. We may need fewer growers of grains, tobacco, and cotton; perhaps we should have fewer farmers in the aggregate. But truck and dairy farmers near our cities may yet have expanding opportunities if urban populations are to be properly fed. Some observers have feared that production controls, now extended to virtually every farm product, may prevent such expansion, perhaps by maintaining prices at levels which city populations cannot afford to pay. Department of Agriculture policies, within the framework of Congressional legislation, will decide whether or not these fears are justified.

CHAPTER SEVENTEEN

Consumers: protection and co-operation

THE NATURE OF CONSUMPTION

Consumption is the process of using up goods in the direct satisfaction of human wants. In our market economy, consumers' goods follow a roundabout and circuitous journey through processes of production and exchange before arriving at their destination, the "ultimate" consumer. Goods destined for consumers' use may be classified as perishable, semidurable, and durable, although sometimes the first two kinds are grouped together and called "nondurable." The want-satisfying power of perishables (including services) is destroyed in one operation. Food, beverages, the services rendered by entertainers, fuel and electric current used in the home are examples. At the other end of the scale is found a large and important class of durable goods: houses, automobiles, furniture, radios, books, paintings, watches, cameras, jewelry, and many other items. Unlike nondurables, these "hard" goods do not lose their identity as they are consumed. With the passage of time, of course, they deteriorate and must be repaired or replaced. The third group is made of consumers' wares the life-span of which falls between perishable and durable. Shoes, wearing apparel, and automobile tires are examples of semidurable goods.

This classification was used, for somewhat different purposes, in Chapters 6 and 7. In Chapter 9, it was shown that the trend toward increased production of durable goods has contributed to general economic instability. It was pointed out that the demands for, and production of, durable consumers' goods may at times fluctuate violently, with corresponding fluctuations in the national income and the volume of employment. The evidence is overwhelming that the effects on consumers' goods of changes in the total volume of expenditures tend to vary directly with the durability of the

goods. For example, in the period of declining consumer expenditures from late 1929 through 1932, purchases of durables fell off 52 per cent, of semidurables 20 per cent, and of perishables only 8 per cent.

The increasing relative importance of semidurable and durable goods has, at the same time, raised complications for consumers in deciding what to buy. Not only has the number of choices been greatly increased, but the budgeting of consumer expenditures must take the time factor more fully into account. Durables last for many years. As a result, rational planning of consumer outlays has become a long-range problem involving considerable "discounting" of future contingencies and uncertainties. Should I buy a new radio, or wait until I can afford a television set? A washing machine looks as if it would save my family money, but it may be a mistake to buy one if a self-service laundry is opened down the street. Another complication arises from the fact that most durable consumers' goods are, in spite of the gradual downward tendency in their costs of production, relatively expensive.

Consumption has been skeptically described by some students of the subject as the "dark and unexplored and perhaps unexplorable area" of economic study. It is true that what we know about consumption has not been reduced to psychological and economic laws measuring and predicting the behavior of consumers. There do not exist, and probably never can exist, scientific methods for determining which are the optimum choices for consumers to make when faced by a given set of market prices. Yet many significant questions pertaining to consumers' interests may be asked. How is consumption related to other economic processes? What pressures tend to influence the choices made by consumers? To what agencies can consumers in the United States turn for guidance? Can the enormous wastes in consumption be reduced? Can the bargaining power of consumers be strengthened? These questions will be discussed in the remainder of this chapter. They should not be treated as separate issues. They represent many integral parts of one basic problem—viz., the position of the consumer in the American economy.

THE PLACE OF CONSUMPTION IN THE ECONOMY

Certainly consumption is the end and the *raison d'être* of economic activity; it is the one economic function which all members of the community have in common. As Adam Smith expressed it more than a hundred and seventy years ago in the *Wealth of Nations*, "consumption is the sole end and purpose of all production; and the interest of the producer ought

to be attended to only in so far as it may be necessary for promoting that of the consumer. The maxim is so self-evident that it would be absurd to attempt to prove it." But to most consumers living in the twentieth century, as well as to those who lived under the mercantilist system, another quotation from the same source offers a more realistic description of the relationship between production and consumption: "The interest of the consumer is almost constantly sacrificed to that of the producer; the system seems to consider production and not consumption as the ultimate end of all industry and commerce." What Adam Smith stated as true of his time is also true of our own.

In Adam Smith's day, before the full development of the machine process, when production was small-scale and "to order," consumers could actually exert a direct influence upon both quantity and quality of production. This was the custom-order stage when producer-consumer relationships were personal and close. The development of machine methods in the late nineteenth and in the twentieth century enormously increased the range and amount of goods available to consumers. Yet in return consumers yielded a considerable measure of their power over production. The disappearance of custom work, the rise of the "impersonal market," increasing rigidities in the price structure, the decline of competition, and the growth of monopoly constituted the price consumers paid for the benefits of mass production.

DO CONSUMERS GUIDE PRODUCTION?

Who is to control the system of production and to what ends? This question is of basic importance, especially in a democracy. Doubtless, the great body of American consumers would agree with Adam Smith in thinking that the primary function of industry is to serve their needs. But how is it possible for consumers to guide production according to their desires? The answer to this question was also given, for free markets, by Adam Smith. Control of production by consumers, according to this view, is effected automatically through the operation of the market. Implied in such a system are competition, free enterprise, individual initiative, price flexibility, and mobility of productive resources. It may be helpful to review briefly this traditional view of the operation of a market.

The price system co-ordinates consumption and production. Variations in particular prices reflect changes in consumers' choices. More specifically, consumers indicate their preferences for certain goods by spending money for them; they "vote" for certain commodities and not for

others. These dollar "votes" are "counted" by an expansion in production of the goods for which the number of "votes" cast has increased. A declining demand for other articles is followed by a fall in their prices, which, in turn, induces a curtailment of their production. Fluctuating prices, therefore, are watched closely by enterprisers because they reflect changes in consumers' scales of preferences. Appropriate shifts in the use of productive resources, under the guidance of the profit motive, tend to follow variations in consumers' choices. In a "frictionless" economy these adjustments are assumed to occur quickly and with a minimum of disturbance.

To work perfectly, such a consumers' democracy also requires free competition and perfect knowledge of market conditions on the part of both consumers and producers. The completely rational consumer knows exactly what things he wants and what prices he can buy them for. He is able to distinguish between superior and inferior qualities and has a high degree of "sales resistance." Competition is expected to perform the double task of holding prices down near production costs and of protecting consumers against adulteration.

Does this description correspond to the facts of the present-day economic world? Many of the assumptions mentioned are patently invalid to a greater or less degree. The growth of monopoly has, of course, reversed the universal tendency for prices to be kept low by competition, if indeed it ever was universal. Moreover, consumers seem to be as ignorant as they ever were of the quality of the goods for sale, of the relationship between price and quality, and of alternative opportunities in the market. Their ignorance, credulity, and bewilderment tend to make them easy prey to advertising and to aggressive sales tactics. Large groups of consumers stand ready to capitulate to the dictates of fashion and convention. Habit and impulse, more than rational calculation, explain many consumers' "votes." To repeat, consumers are not, as such, perfectly rational beings. Even if they were, they would still be matched against powerful and well-organized selling groups.

When all these qualifications are made, we may still speak of our economy as one in which the consumer is sovereign—even though his sovereignty is limited, and is not always wisely used. That is to say, the willingness of the consumer to buy some products, and his refusal to buy others, is still the main determinant of business success or failure. Therefore, manufacturers should not be blamed if the articles they manufacture are not always the "best" from the standpoint of consumer welfare. If consumers' tastes are such that they prefer to purchase ugly rather than beautiful objects, or if

the community "votes" to spend its money foolishly instead of wisely, producers will tend to respond accordingly. The housewife who buys a loaf of bread is exercising consumers' sovereignty; so is the alcoholic who orders "the same again." Of course, consumers have the power to exercise their sovereignty ever more intelligently by learning to become more rational and better informed in making choices. Cultivation of the "art of buymanship," as Leland J. Gordon calls it, is a worthy aim for every one of us.

In conclusion, we should notice a further important implication of the control that consumers have over production. The "votes" with which consumers exercise their sovereignty are of course money votes. In anticipating or responding to consumers' preferences, producers create the kinds of commodities desired by those who are able and willing to pay. Ability to pay of course depends on income, and—as we know from Chapter 8—income is unequally distributed. So, therefore, is the "voting power" exercised in the market place. Where income is concentrated in the hands of a small number of wealthy families, productive resources are applied in quite a different manner than is the case where wealth and income are more evenly distributed.

CONSUMERS ALSO ARE PRODUCERS

Another handicap of consumers lies in their incapacity to act exclusively from the viewpoint of their "consumer-selves." In order to spend, consumers must acquire money incomes. Therefore, everyone who has an income really has two economic personalities, producer and consumer, income-receiver and income-spender. The typical person's attitude toward the economic system tends to be concerned primarily with the interests of his earning, as against his spending, self. Watchmakers, for instance, are more interested in excluding Swiss watches from the American market than in allowing good watches to be sold as cheaply as possible.

How many "producer-consumers" are there in the United States? As this is written, there are more than sixty million gainfully occupied workers of all kinds. Most of these people were heads of family "consuming units," of which there are approximately thirty-five million; about five million others are individual "consuming units" not in families. There also are about twenty-five million additional workers in American homes who are not in the technical sense gainfully employed. Yet these housewives and housekeepers are engaged in productive activities directly associated with

the home, and are in a strategic position to influence [illegible] of consumption. The remaining fifty five million [illegible] consisting of superannuated persons, children, and other [illegible] gainfully employed but are consumers just the same. [illegible] of children and other dependents, as consumers are [illegible] for them by others.

DISPOSABLE INCOME AND CONSUMPTION

The choices a consuming unit can make depend [illegible] size of its disposable money income (i.e., income [illegible] taxes). More accurately, disposable money income [illegible] choice. Obviously, two individuals with exactly the [illegible] make exactly the same choices. Nevertheless, [illegible] come bracket, especially if it is a low one, will [illegible] consumption which do not vary considerably, [illegible] higher a person's or a family's income, the wider is the scope [illegible] tion in consumption. Likewise the higher the income [illegible] without serious sacrifice. The capacity to save tends [illegible] sively with income, a fact of no little importance for the [illegible] considering the patterns of consumption outlined below. [illegible] the size and distribution of the national income, as described [illegible] should be borne in mind.

CONSUMPTION PATTERNS IN THE UNITED STATES

Some consumers shop for their entire families, others for [illegible] alone. Some are rich; others poor. Some know their own minds, others [illegible] second thoughts after making even small purchases. Consumers [illegible] habit, or they compare prices; they figure that they can afford [illegible] they cannot afford that; daily they reach decisions about whether [illegible] what to buy, and how much to buy. The collective result of all these decisions throughout the nation appears in the statistics which tell us what sums were spent for major types of consumption during the course of any given year. Some of these statistics have been assembled in Table 10 and Fig. 25.

Patterns of consumption change from time to time as a result of variations in four major factors. (1) The tastes and preferences of consumers may alter. (2) The size of the national income may change, and with it the

extent to which any given set of tastes can be indulged. (3) A change may occur in the way in which the national income is distributed among rich and poor, city folk and farm folk, and so forth—so altering the identity of those who, principally, will be able to indulge their tastes. (4) Variations may occur in the relative price and availability of different consumers'

Table 16 PERCENTAGE DISTRIBUTION OF PERSONAL INCOME BY USE, 1929-1946

	1929	1932	1939	1944	1946
Personal income					
in billions	$85	$49	$73	$165	$177
percentage	100.0%	100.0%	100.0%	100.0%	100.0%
Income taxes	3.1	2.9	3.4	11.4	10.6
Savings	4.4	—2.8	3.7	21.6	8.3
Consumption expenditures	92.5	99.9	92.9	67.0	81.1
Consisting of					
Food	23.1	23.1	21.9	19.3	24.2
Tobacco	2.0	2.7	2.4	1.5	1.9
Alcoholic beverages	—	—	4.7	4.4	5.0
Clothing	12.9	12.1	11.4	10.9	12.5
Personal care	1.3	1.7	1.4	1.1	1.3
Housing	13.4	18.2	12.3	7.1	7.2
Household operation	12.4	13.5	13.0	8.1	10.2
Medical care	4.2	5.2	4.7	3.3	3.6
Transportation					
automobile	6.8	5.8	6.8	1.6	4.3
other	2.0	2.2	1.8	1.8	1.8
Recreation	5.1	4.9	4.7	3.1	4.5
Private education	0.8	1.2	0.9	0.6	0.5
Religious activities	1.4	2.0	1.3	0.9	0.9
Miscellaneous	7.1	7.3	5.6	3.3	3.2

goods; that is, in the ease or difficulty with which different tastes may be indulged. The effect of variations in some of these factors may be observed in Table 16.

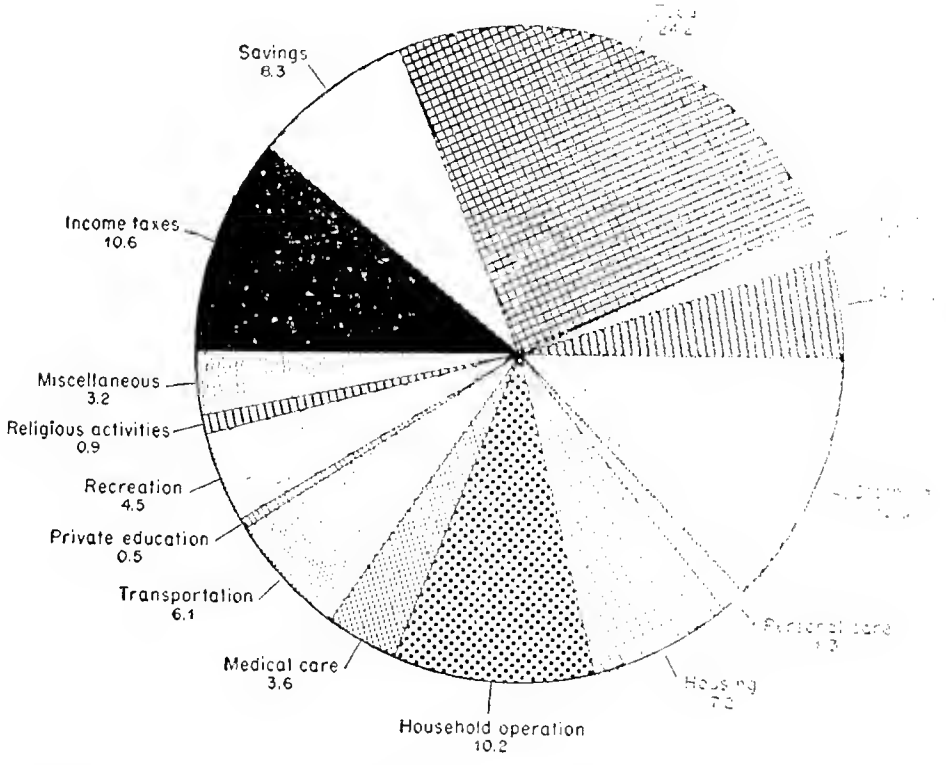
Of the years for which data are shown in the table, 1929 is remembered for its active business conditions, 1932 as a year of acute business depression, and 1939 as a representative prewar year of fairly active trade. 1944 was the last full year of war, and 1946 the first complete year after hostilities ended. The figures in the table refer to personal income, i.e., the sum of the incomes of all individuals in the nation. As explained in Chap-

ter 7, personal income equals national income minus undistributed [illegible] plus transfer payments (see Table 9, page [illegible]). The figures for personal income in the first line of Table 16 are in current dollars, and have been adjusted for price changes.

The influence of the size of the national income on consumption patterns is best seen by comparing the distributions in the first [illegible]

Figure 25 DISTRIBUTION OF THE CONSUMER'S DOLLAR, 1946

(FIGURES IN CENTS)



of Table 16. Thus the sharp fall in national income between 1929 and 1932 cut current saving from 4.4 to *minus* 2.8 per cent. In 1929 people saved on the average more than four cents from each dollar of income; in 1932 they spent for consumption or paid in taxes nearly three cents on the dollar more than their incomes, i.e., they drew on past savings. Moreover, the percentages of income spent for the least compressible items of consumption, such as food, housing, and medical care, remained stable or increased as income declined. On the other hand, the effect of a sharp rise in the national income is seen in the comparatively high percentages saved in 1944 and 1946.

The very high proportion of income saved in 1944 (over one-fifth) was of course due in part to wartime propaganda in favor of thrift and to

the absence from the market of many consumers' goods. The nonavailability of many products, especially durable goods, in 1944 is reflected also in the low percentages of income spent for household operation and for automobile transportation.

Some effects of relative changes in prices can also be observed in Table 16. The marked decline in the percentage spent for housing—for instance, from 12.3 in 1939 to 7.2 in 1946—was clearly due to the fact that ceilings prevented rents from rising. Thus the price of housing failed to rise as other prices rose and (since little or no more housing was available than in 1939) the per cent spent for housing declined. Note also the sharp rise in the percentage spent for food—from 19.3 in 1944 to 24.2 in 1946. This movement is mainly a reflection of the end of wartime rationing and price-fixing and the greater increase in the cost of food than of other consumers' goods.

EXPENDITURES OF DIFFERENT INCOME GROUPS

Many years ago Ernst Engel, as a result of statistical study of the expenditures of workers' families in Saxony, reached the following general conclusion: "The poorer an individual, a family, or a people, the greater must be the percentage of income necessary for the maintenance of physical sustenance, and, of this, a greater proportion must be allowed for food." Engel's figures showed that the proportion of income spent for food declined as income increased, that the proportion spent for housing tended to remain about constant for all levels of income, and that the proportions spent for other kinds of consumers' goods tended, in general, to rise as incomes increased. A somewhat similar relationship may be observed in studying consumption expenditures by various income classes in the United States.

To measure the proportional expenditures for various kinds of consumers' goods by different income classes, we may divide all consuming units (families and single individuals) into three equal groups: the third receiving lowest incomes, the third receiving middle-size incomes, the third receiving highest incomes. The best data that we have concerning proportional expenditures of such income groups are those compiled by the National Resources Committee for the year 1935-36. The first group was made up, in that year, of thirteen million units receiving less than $780, the middle group of an equal number of units receiving between $780 and $1,450, and the third group of an equal number of units with incomes of more than $1,450 and with an average income of $2,959.

For food, the first, or lowest, third used 50 per cent of its income, the middle third 38 per cent, and the highest third only 22 per cent. Proportional expenditures for shelter declined somewhat less rapidly: for the lowest third they amounted to 36 per cent, for the middle third to 29 per cent, and for the highest third to 22 per cent. Proportional expenditures for clothing showed marked evenness among the three classes: 10 per cent for the lowest, and 9 per cent for the middle and highest. On the other hand, in the case of automobiles and automobile transportation proportional expenditures showed a tendency to increase: from 3 per cent of income for the lowest third, through 5 per cent for the middle third, and 7 per cent for the highest third. Other items of expenditures showed a similar tendency to increase.

THE CHANGED STATUS OF CONSUMERS

It has been stated that consumers, though dimly aware of their immense responsibility in guiding production through the making of intelligent choices, have nevertheless functioned rather ineffectually. One reason why consumers' sovereignty is not fully exercised today lies in the extremely rapid rate of economic change in the United States over the past fifty or sixty years. Consumers of the present day find themselves surrounded by a very different environment from that of their grandparents. Two especially important changes date from the latter decades of the nineteenth century. The first was the growth in the size of business units, which led to restrictions of competition; the most dramatic of these restrictions form the history of the trust movement. The second was the rapid change of the United States from a predominantly agricultural to a predominantly industrial nation. The second change is measured by the decline in the proportion of the labor force engaged in agriculture from one-half in 1880 to one-sixth in 1940 (Fig. 24, page 393). Moreover, those who remained in farming became less self-sufficient and more dependent on the sale of their produce. All this meant increasing division of labor and growing dependence of consumers on the market.

For the sake of comparison, let us consider a typical situation of the 1870's. A "typical" consumer (a farmer or his wife) goes to a "typical" store (a store handling general merchandise in a small town) to buy some goods. Several conditions are significant:

1. The goods the customer buys are few. There is a comparatively small variety of goods in the store, and the customer is in some degree self-sufficient.

2. The goods are of simple fabrication and therefore it is relatively easy for the customer to select goods of the best quality. It is also possible that the customer has some craftsmanship knowledge of the product.

3. The customer is within sensual range of the product. He can see it, touch it, smell it, or even taste it.

Now let us consider the situation today. A "typical" consumer of today (an industrial wage earner or a white-collar worker) goes to a "typical" store (a modern grocery or department store). The store is located in a fair-sized town or industrial city:

1. The goods the customer buys are many. There is a relatively large variety of goods in the store, and this customer is not in any sense self-sufficient.

2. The goods are of complex fabrication. It is virtually impossible to distinguish the quality of the goods. It is very unlikely that the customer has any craftsmanship knowledge of the product.

3. The customer is no longer within sensual range of the merchandise. It may be hidden from sight by a tin can or enclosed in an attractive package. He may be permitted to examine a sample. If he is satisfied with this, he has to depend on the good faith of the seller in duplicating the sample. It is more probable that he will purchase merchandise he has seen advertised, without examining it, relying merely on the good faith of the seller's advertising.

Thus we see important differences in the market positions of consumers of the 1870's and consumers of the present day in regard to: (1) the consumer's check on the quality of the merchandise, and therefore on its worth in relation to its price; (2) the degree of competition that serves to further or to retard consumers' interests. In addition, the methods by which the consumer pays for the merchandise are different today.

The remainder of this chapter is devoted to a consideration of these differences, a description of the methods which are being employed to protect consumers of the present day, and some suggestions as to future courses of action that may serve to promote consumers' interests.

THE PURE FOOD ACTS

The increasing dependence of large urban populations upon purchased food, often obtained from distant sources of supply, led after 1880 to agitation for pure food and drugs legislation. The activities of Dr. Harvey W. Wiley and his "poison squad" revealed widespread adulteration and misbranding by food packers. In particular, many harmful chemicals came

into use as food preservatives at a time when refrigeration was not yet well developed. Simultaneously there arose a demand for the suppression of the more dangerous patent medicines. Numerous pure-food bills failed of passage, but in 1906, thanks partly to the publication of Upton Sinclair's unflattering picture of the Chicago stockyards in *The Jungle*, Congress enacted the Pure Food and Drugs Act. This law made it unlawful to manufacture or to import any adulterated or misbranded food or drug. The principal method of enforcement has been seizure and destruction of the offending merchandise, although other penalties are also provided in the law. Administration was in the hands of the Department of Agriculture until 1940, when the Food and Drug Administration was transferred to the Federal Security Agency.

In the opinion of most people who have studied the matter, the act of 1906 effected a marked improvement in the healthfulness of the nation's food supply. Yet it was also widely felt to contain serious weaknesses. In the first place the courts early ruled that "drugs" did not include cosmetics. Secondly, unless they contained one or more of a small number of specified substances, considered especially dangerous, patent medicines might continue to keep their composition secret, even from the medical profession. Thirdly, advertising matter, aside from that on the package itself, was not covered by the law. These and other defects led to agitation for a strengthening of the law, and in 1938 the Federal Food, Drug, and Cosmetic Act was passed. This act extends controls to cosmetics, requires disclosure of "active ingredients" in proprietory remedies, and insists that those which contain certain listed drugs shall be labeled: "Warning—May be habit-forming." In addition it authorizes restraint of violations by injunction, expands the definition of adulteration and misbranding, removes the necessity of proving fraudulent intent, and permits inspection of factories producing foods, drugs and cosmetics. At the same time, control of advertising was placed in the hands of the Federal Trade Commission by the Wheeler-Lea Act.

While the legislation of 1938 represents an undoubted improvement, from the standpoint of protection of the consumer, over that of 1906, its intent is still primarily negative. That is to say, the law concentrates on preventing the consumer from purchasing wholly worthless products or from poisoning himself. It does little to insure positively that he gets good value for the dollars he spends on food, drugs, or cosmetics. Perhaps that is not the function of a pure food and drug law. Yet the 1938 act does allow the Food and Drug Administration to establish a single acceptable standard of quality for individual foodstuffs. Where the administration has announced

such a standard, items which do not conform must be labeled "Below U.S. Standard." Obviously this does not help the consumer distinguish between numerous brands all of which are "acceptable."

CONSUMERS' CHECK ON QUALITY AND PRICE

A few examples will serve to illustrate the situation of consumers of the present day in regard to their opportunities to check the quality of the merchandise. A test of cotton sheeting was conducted by R. C. Cook of Teachers College, Columbia University. Nine makes of sheeting were selected. Laboratory analysis, based on Bureau of Standards methods, determined the relative quality of each. This quality was then compared with the price. The make ranking eighth in quality ranked second in price. Of two makes whose quality was identical, one sold for two and one-half times as much as the other. The lowest-priced sample was sixth in quality. The sample best in quality was lower in price than three others.

A group of consumers not knowing the prices were then asked to rank the nine samples on the basis of scrutiny and touch. The sample to which these judges gave the highest ranking was fourth on the basis of the laboratory test. The sample ranked second was seventh according to the test. The only sample on which the judges agreed with the test was that which ranked last.

The Consumers' Advisory Board of the NRA, in its survey of the terms used in designating qualities of goods, reports that there frequently are "concealed top grades," typical examples of which occur in the grades of potatoes and of cheese listed below. At its face value "No. 1" would mean the highest grade, but it actually means the second grade of potatoes and the third grade of cheese. "No. 2," which ought to be next to the highest grade, is actually fourth. This results in the consumer's receiving goods one or two grades lower in quality than indicated by the face value of the terms used.

Potatoes	*Cheese*
U.S. Fancy	U.S. Extra Fancy
U.S. No. 1	U.S. Fancy
U.S. Commercial	U.S. No. 1
U.S. No. 2	U.S. No. 2

The same method of designating qualities of goods was found in the case of raw silk and asparagus. An interesting difference in the marketing of these two commodities is that one of them—raw silk—is bought by experts,

while the other—asparagus—is bought by consumers who ordinarily are not experts. Yet in both cases the grade names consist of superlatives which might lead an uncritical buyer to suppose a particular grade to be higher than it actually is.

Raw Silk	*Asparagus*
Special Grand	Colossal
Grand XX	Jumbo
Special Crack	Extra Select
Crack XX	Select
Extra Extra	Extra Fancy
Best Extra	Fancy

Not one case was found of a grade name suggesting a quality lower than the actual one. The Consumers' Advisory Board also reports that the testimony regarding standards for consumers' goods at the hearing on the canning industry showed that the absence of identifying labels not only hides from buyers the true quality of goods concealed in cans, but also results in competition between grades at prices not always bearing a relationship to quality.

There are numerous other examples which might be cited to show the difficulties of present-day consumers in determining the qualities of goods. They are not accurately guided by labels or advertisements. They cannot determine the quality of the merchandise by means of their senses. Prices cannot be regarded as accurate guides to quality.

EFFORTS TO SECURE GRADE LABELING

The arbitrary character of the descriptive grading practiced by producers of consumers' goods has led from time to time to efforts to introduce a more systematic form of grading, usually in the simple form, A, B, C. The usefulness of grading is perhaps especially obvious in the case of canned and packaged foodstuffs, where the prospective buyer cannot possibly examine the contents. To date voluntary organizations of consumers, such as Consumers' Research and Consumers' Union, have been the principal sources of information about the relative worth of competing merchandise. These organizations not only classify consumers' goods by grade, but in the case of the more complicated products, such as cars and radios, they issue reports containing the results of elaborate tests.

The suggestion that some government agency should take over this work is an old one. The National Bureau of Standards makes thousands of

tests every year of commodities purchased by the federal government. It publishes specifications for the guidance of those who supply the government, but it does not say which products meet those specifications. In 1943 the wartime Office of Price Administration declared that it could not enforce price ceilings in the case of canned fruits and in the case of hosiery unless grading of these products was made compulsory. However, as a result mainly of opposition by the advertising industry, the project for compulsory grading was abandoned.

Greater success has been had with a voluntary grading of certain canned foodstuffs as A, B, or C, inaugurated by the Agricultural Marketing Service (Department of Agriculture) in 1939. Since 1907 all meat entering interstate commerce has been federally inspected, and here again producers may (if they wish) have all fresh meat certified as conforming to one or other of five specified grades. Indeed, the frequent claim that it is impracticable to set up standards seems to have been disproved by the experience of the many voluntary grading schemes now operated by the Department of Agriculture. Yet consumers' organizations have found that the opposition to compulsory grading is exceedingly strong. In fact, consumers for the most part buy under conditions no longer tolerated by government or industrial purchasers. Government and industrial purchasers buy according to specifications only. Why should consumers almost never be protected in this manner?

QUALITY STANDARDS UNDER THE NRA

The history of the NRA codes provides an explanation; the record of this episode is similar to that of all legislative attempts to protect consumers. In February 1934, of 237 approved codes only 73 made any provision for quality standards. In the gas appliance industry, for example, there was a failure to embody in codes standards previously developed by the trade groups presenting the codes. In four cases the code authority was instructed to declare the giving of guarantees beyond a certain point an unfair trade practice, although the bulk of the firms affected had long been accustomed to give guarantees which went considerably beyond the point in question. Other codes embodied standard clauses, the effects of which were to facilitate arbitrary price-fixing. Many of the standards set up were vague and likely to mislead purchasers.

One of the members of the Consumers' Advisory Board of the NRA had the following to say about standards in relation to the codes. "The codes are written by and for sellers, whereas standards are drafted in the

main by buyers. Those responsible for original code formulation are interested in buying on their own specifications; that is to say, they would participate in the writing of the other fellow's standards. They intend thereby to prevent 'chiseling' on the quality and quantity of the materials purchased while asking at the same time to be given a *carte blanche* in their own sales."

We need then look little further than the manufacturing and advertising "pressure lobbies" in Congress to explain the lack of standards for consumers. Organized consumers' interests are few and have not the financial resources necessary to fight these "pressure lobbies" with lobbies of their own. It is, in theory, quite possible for the federal government to require adherence by producers to an established set of standards with regard to a wide range of commodities. Such a program could effect savings for consumers many times greater than the cost of the program to the government.

LIMITING COMPETITION BY LAW

It has already been pointed out that efforts to have the government protect the consumer have run into much opposition on the part of producers' groups. Effective regulation has mostly been confined to the protection of health and the elimination of the worst abuses, such as the giving of short weight. Attempts to make it easier for the consumer to judge quality, and so to obtain maximum satisfaction from his dollar, have made little progress. The sovereignty of the consumer is ineffective, and competition fails to furnish him with supplies at minimum cost, unless he is able to appraise the relative qualities as well as the relative prices of various goods. Indeed, so far from helping the consumer in buying cheap, some governmental policies have made it more difficult for him. Among these policies may be mentioned the Miller-Tydings Price Maintenance Act, the Robinson-Patman Act, and the special taxation of chain stores by many states.

The Miller-Tydings Act. As was shown in Chapter 12, the Miller-Tydings Act is designed (in conjunction with analogous state laws) to prevent the sale of branded merchandise at prices below those set by the manufacturers. By this means distributive margins are protected and competition between retail outlets is reduced. The retailer is still free to sell unbranded merchandise, or his own brand, at whatever price he chooses. The consumer often has no means of deciding whether the much-advertised price-fixed goods are or are not superior to the cheaper unbranded items which compete with them.

Competition by chain stores. Another way in which competition has been restricted within recent years concerns the status of chain stores. Rather elaborate investigation by the Federal Trade Commission suggests there is little difference in quality between merchandise bought in chain stores and merchandise bought from independents. There is considerable evidence that, especially in the grocery trade, chain stores sell at somewhat lower prices than independents.

The question of price does not, of course, cover all phases of the problem of "chains vs. independents." The personal relations which many people have with owners of independent stores are, to those people, of great importance. Many persons also feel—whether or not with sufficient justice—that chains would tend to exploit consumers if they were not subjected to competition by independents. Again, many believe that the services rendered them, on personal grounds, by their independent grocers and druggists are superior to those offered by chain groceries and drugstores.

Some of the reasons chain stores can afford to offer merchandise at lower prices are perhaps open to question. The competitive prices and trade policies of chain stores are often not what is termed "fair competition" by the small independent retailer. The large buying power of chains has led manufacturers to make them many special concessions in prices, promotional allowances, discounts, allowances for brokerage, free goods, etc., which are competitive handicaps to the independent. However, consumers' interests are not directly concerned with the competitive problems of a particular type of distributor, but they are directly concerned with the long-run level of the prices at which goods are sold.

The Robinson-Patman Act. As part of a program of "fair-trade" law, designed to regulate if not to diminish competition between independents and chain stores, the Robinson-Patman Act has already been mentioned in Chapter 12. Its general purpose is to make it illegal for a manufacturer to sell a given commodity to different retailers at different prices. It makes it more difficult for a large retailer to take advantage of superior bargaining power or of bulk purchasing in buying the goods he sells. The law has led to extensive litigation since it was passed in 1937, and the question as to exactly what constitutes illegal discrimination by a manufacturer among his customers has become more involved with each decision.

Chain-store taxes. About one-third of the states have imposed special taxes on chain stores, usually according to the number of branches operating within the state. The motives behind these laws appear again to be those of business concerns (independent retailers, wholesalers, and some manufacturers) which are acting in their own interests rather than those of con-

sumers. Whether it is desirable public policy to use the power of the state to bolster independent business is, of course, quite a different question.

The Federal Trade Commission has something interesting to say on this subject. It states that it was led to investigate the growth of chain stores mainly by a widely expressed fear that this form of merchandising might develop to a point where the field of retail distribution in certain areas would be monopolized. "The competition which they [the chains] furnish to each other, supplemented by that of independent stores, would seem to negative monopoly by any individual chain. . . . A study of the extent to which chain-store companies have invaded the general field of retail distribution of commodities does not indicate a monopolization of that field, taken as a whole." The commission warned, however, "should the trend of the past 20 years and particularly of the last decade continue for a like period, we shall have a condition in some lines of chain-store merchandising that few will dispute is monopolistic." [1]

The commission's disapproval of special chain-store taxes, imposed either by the states or by Congress, is summed up as follows: "Such a policy [taxing away the chains' advantages], however, would involve destruction of the chain's ability to make lower prices than independents and would provoke wide protest from consumers. *Pro tanto*, any tax on chain stores which substantially lessens their ability to undersell independents is open to the same practical objection. If ability to undersell based on greater efficiency or on elimination of credit and delivery costs is destroyed by taxation, it is the consuming public which will really pay the tax and not the chain." [2]

It will be plain from this discussion that consumers have received a complicated assortment of benefits and burdens from public policy. On the one hand the Food and Drug Administration has done much to save consumers from ill-health and even poisoning. Some tentative steps have also been taken to protect consumers' pocketbooks through plans for grading merchandise. On the other hand legislation has also been passed, mainly at the instance of special groups of producers or distributors, which seems to have raised the prices of many products and made efficient distribution more difficult. We should not be surprised that public policy has often been inconsistent, for those who have demanded legislation most insistently are usually those who have obtained it. Consumers are ill-organized and seldom vocal; often they have been inaudible.

[1] *Final Report on the Chain-Store Investigation*, Federal Trade Commission, 1935, pp. 19, 86.

[2] *Ibid.*, p. 82.

PRINCIPLES OF CONSUMER CO-OPERATION

Attempts of consumers to advance their interests through legislation have been supplemented by efforts at self-help. Why, some consumers asked, should they not organize their own distribution system? The modern movement for consumers' co-operatives began in the English town of Rochdale in 1844, and spread rather rapidly throughout Europe. The first sustained and consistent operation of consumers' co-operative societies in the United States was that of the Finns who settled in northern Minnesota, Wisconsin, and Michigan, and who had brought the ideas and the practice with them from Europe.

The guiding principle of all forms of co-operation—one which distinguishes it clearly from unmodified individualism—is that people voluntarily act together to meet difficulties or to accomplish purposes which all of the people concerned have in common. Since each person acts *voluntarily*, co-operation also differs from the kinds of joint action in which people engage under the authority of the state. Traffic laws, for example, or laws designed to improve the public health, protect each person in the community against dangers which are common to all. But there is compulsion in the sense that violators of the laws are liable to punishment. Thus, in its economic phases, co-operation represents a range of relationships among people which differ from those of private business, and also from rules established and enforced by government.

Yet, while co-operation differs from the common expressions of economic individualism, it also differs markedly from economic collectivism. The distinction here was well stated by a distinguished French economist and co-operator, the late Charles Gide. He pointed out that "cooperation is essentially individualistic, for it implies the steady, unceasing activity of individual efforts with a goal in sight and moving towards it with a stubborn will. It is just because the cooperative system retains intact the individualist mainspring as the basis of all economic activity, with its spontaneity and inexhaustible resources of invention and renewal, that cooperation has proved fruitful and beneficial . . ."

TYPES OF CO-OPERATION

Economic co-operation of some kind or other always has existed in this country. The log-rollings and corn-huskings of the frontier settlers are traditional examples. In all of its forms, this voluntary joint action has

given added economic security to the people concerned. Besides these neighborly and informal kinds of co-operation, there have been some rather ambitious attempts at "producers' co-operatives," in which groups of workers organized and ran their own shops or factories. The producers' co-operative movement in this country has, however, been sporadic, and most of the attempts have ended in failure. Many co-operative business ventures have lacked sufficient capital or encountered serious administrative difficulties. It sometimes has been impossible to secure agreement among the worker-members as to operating policies. Again, in times of stress within the business, members have been known to withdraw from the co-operative in order to accept jobs which, for the time at least, were more lucrative.

A more enduring form of economic co-operation in the United States has been co-operative marketing associations. These associations are especially well adapted to the needs of agriculture and consequently have arisen principally among farmers. Their formation has occurred most frequently in places where local monopolies have been the only buyers of farmers' produce, with resulting disadvantages to the farmers. This condition has led to the creation of a considerable number of co-operative creameries, co-operative grain elevators, etc., in regions where farmers produce some staple agricultural commodity in sufficient quantities to warrant such joint enterprises. The California Fruit Growers Exchange is a notable example of a marketing co-operative which conducts its affairs on a much wider scale. This exchange is the selling agency for more than two hundred local associations of citrus-fruit growers. It has cultivated and developed the national market for California citrus fruits. By regularizing the shipment and delivery of citrus fruits to principal markets, it has even been able to stabilize, to some extent, the supplies of oranges, lemons, limes, and grapefruit entering these markets, and thus to avert some of the price oscillations. Marketing co-operatives have as their members producers of goods. Their co-operation, however, does not extend into the actual production of goods, but applies only to the selling of the goods produced independently by each member.

Both producers' co-operatives and marketing co-operatives are ways of organizing and conducting business for private gain. The benefits that may be derived from them go to increase the profits of the producers that make up their membership. They compete in the market with other producing and selling organizations. They operate on the supply side of the commodity markets. Consumers' co-operatives, on the other hand, operate on the demand side of the commodity markets.

Consumers' co-operative societies also represent a way of organizing

and conducting business. Yet the people who join these societies reject both the principle and the fact of competitive business. It may be said that monopolies and trusts also reject competition: such organizations of business are in agreement with the co-operative societies in that they desire to escape the wastes of competition. The obvious difference between the two lies in the purposes which they serve; monopolies and trusts seek to maximize their profits, while co-operative societies aim at maximizing the quantities and qualities of goods and services secured by their members.

CONSUMER CO-OPERATION IN THE UNITED STATES

The slowness of the movement to develop in this country usually is explained along the following lines: (1) the tendency of Americans to migrate from one section of the country to another makes it difficult for many to cultivate enduring local economic relationships; (2) traditional individualism has led Americans to be primarily interested in making money incomes, and interested hardly at all in banding themselves together to insure more effective spending of their money incomes; (3) a growing co-operative movement must, *pari passu*, displace existing private business enterprise, which in this country is deeply entrenched and financially powerful.

The growth of the co-operative movement in this country—and the prospects of its further growth—is so intimately bound up with the success or failure of private business that it must be studied in relation to private business. This phase of the matter is probably of even greater importance here than in the countries of Europe. The tradition of privacy of business appears to be stronger here, and the financial power of the "orthodox" producing and distributing systems appears to be greater. Consumers' co-operatives in this country must compete with entrenched chain-store systems, great department stores, and powerful mail-order houses. Back of these retail concerns are wholesalers and jobbers, manufacturers, and the financial strength of private bankers and investment houses. All of these as economic institutions stand as obstructions to consumer co-operation. Co-operative societies often have found that they were discriminated against by wholesalers and manufacturers (who, quite naturally, did not want to lose the business of the private retailing concerns) and that it was difficult for them to secure credit for their operations. People interested in the movement used to say that a capital of millions of dollars would be needed if consumer co-operation was to hold its own against competition and discrimination.

Yet the movement has started—and without being a giant at birth. It has begun with the organization and growth of small local societies. The

total scope of activities has, however, become strikingly large. The editor of *Retailing* (a trade journal devoted to the interests of private retail business) in an editorial in October 1936 estimated the membership of retail co-operative societies at three million. In 1947, according to the Co-operative League, co-operative retail stores in the United States had fewer than a million members; but if co-operative filling stations and farm-supply organizations are included, the movement had about two and a half million members and sold about a billion dollars worth of merchandise.

CO-OPERATIVES *VS.* PRIVATE STORES

Consumer co-operation is essentially a way in which people have sought to overcome some of the difficulties that have been imposed on them by the dominance of the market system, and, at the same time, to retain the advantages of that system. Apart from the obvious protection with regard to standards of quality in merchandise and the equally desirable removal of the influence of high-pressure salesmanship, a significant test of co-operative success lies in comparing the prices of merchandise and costs of operation of co-operative stores with those of privately owned stores. Comparison is made difficult by differences in kinds of services rendered. Private stores, for example, often extend credit and deliver merchandise to customers; co-operative stores seldom render either of these services. There are, however, fairly adequate data covering certain categories of co-operative store costs in a few regions of the United States. These "sample" data, reduced to percentages of net sales, are roughly comparable to the same cost categories of private stores.

In considering the comparisons that follow, however, it should be borne in mind that they are subject to some error because of differences in accounting methods and other factors, and that the figures which are compared are averages of costs of many stores whose individual costs vary considerably. The three groups of co-operative stores whose costs are available are situated in the West North Central states, the East North Central states and the Pacific Coast states. Statistics for private stores are based upon the Dun and Bradstreet *Retail Survey* of 1936 and refer to general merchandise stores in small towns. The data were brought together for purposes of comparison by Clark Kerr, some of whose findings are summarized below.[1]

[1] This comparison of costs and operating conditions of co-operative and private stores is abridged, by permission, from Clark Kerr, "Comparative Retailing Costs of Consumers' Cooperatives," *The Annals of the American Academy of Political and Social Science*, May 1937, pp. 116-24. Footnotes of the original are omitted here.

Overhead costs. The total overhead expenses of each of the three representative co-operative groups compare favorably with those of private stores in their areas and on a national basis. The stores affiliated with the Central Cooperative Wholesale Society had overhead expenditures equaling approximately 11 per cent of their net sales, as against nearly 16 per cent for the other retailers in the region. Those stores centering around Dillonvale, Ohio, and the California co-operatives spent 14.5 per cent of their net sales, 1.5 to 2 per cent less on overhead than did the private entrepreneurs in their areas.

Profits. The profits of the co-operatives varied from 3 to 4 per cent of their sales, as contrasted with 1 or 2 per cent for the private retailers and 4 per cent for the chain stores. The comparatively large profits of the co-operatives result in part from their desire to return substantial dividends to their members. These profits, added to their overhead costs, made the gross margins of the co-operatives more nearly similar to the statistics for private business. But only for the Dillonvale co-operatives was it higher than for the other stores in the same region.

Retailing costs. The total cost of retailing to the consumer was substantially lower for the co-operatives than for the private stores. The co-operative member pays a cost equal to the overhead expense alone. He receives the profits as dividends or as added capital value to the enterprise which he owns and directs. The patron of the private enterprise, on the other hand, pays a total cost equal to the gross margin, as the profits in this case are kept by the entrepreneur.

An analysis of the statistics shows that the average member of these co-operatives paid a total cost of retailing of from eleven to fourteen and one-half cents on each dollar of merchandise he bought. The consumer buying at the privately owned stores paid from seventeen to twenty-six cents.

The statistics also show a greater percentage of the co-operative stores than of the private concerns to have been profitable. Virtually all the co-operatives made a profit in 1935, while only between one-half and three-fourths of the private concerns so reported. This is due in part to the predilection of private owners to continue operations for a time even at a loss, if they anticipate profits in the future. Co-operatives, on the other hand, almost invariably disband if they are operating at a loss, and many disintegrate even though profitable, if the dividends are not substantial.

Operating expenses. The statistical evidence implies that consumers' co-operatives may perform the retailing function at less cost to the consumer than private business. This conclusion, however, runs counter to the

general belief that the democratic government of co-operatives and the relative absence of financial incentives on the part of employees result in inefficiency. But by studying the individual items of expense in greater detail, logical causes for the apparent savings can be found.

The costs for the co-operatives were generally lower in every item of expense except utilities and the total miscellaneous expenses. These savings can be explained, in part at least, without any reference to such intangible factors as the relative efficiency of management in independent, chain, and co-operative enterprises. In fact, these savings arising out of the methods and nature of co-operative business make any comparison of private and co-operative managerial ability impossible. Some of the factors affecting co-operative cost of retailing in their relation to private costs are considered below.

Advertising. Advertising by co-operatives takes a different and generally less costly form than that considered essential by private enterprise. It is largely education. Instead of newspaper advertisements and special sales, the co-operatives hold educational classes and summer-vacation camps. They distribute books, pamphlets, and periodicals regarding co-operation. Since the educational activities are generally conducted by volunteer committees, the cost is not great.

Cost of special services. Delivery and extension of credit are special services to the consumer which may substantially raise operating costs. While no information is available on the delivery policies of the private and co-operative stores, apparently the co-operative principle of "no credit" affords an opportunity for operating economy. The principle is not always followed, however. The California and Minnesota co-operative groups sell predominantly for cash, but the Dillonvale stores extend credit to many members. They are protected from substantial losses on bad accounts, nevertheless, by requiring a thirty-dollar deposit, in addition to forty dollars invested in share capital, before opening a credit account for a member. The Dun and Bradstreet survey, on the other hand, shows that three-fourths of the private stores extended credit and that their credit sales averaged more than a third of their total sales.

Capital costs. Although no statistics are available to compare costs of capital, co-operative economies frequently begin with this time. Co-operatives secure their capital in the form of dues, membership shares, profits placed in a reserve fund, and the invested savings of members. Interest is usually at a low, fixed rate, and sometimes it is not paid at all on membership shares. In fact, the reserve fund often earns interest, and along with

the dues and membership fees, it increases the net income of many co-operatives by as much as 1 per cent.

In conclusion, it appears that American co-operative enterprises retailing consumers' goods have definite opportunities to keep their costs of operation below those of similar private business. This advantage, however, is not sufficient to assure their success in offering consumers high-quality goods and services at a low cost, unless large wholesale facilities are established and unless the co-operative program itself appeals to large numbers of Americans. In the next decade the movement is not likely to displace private enterprise to an appreciable extent, although it may have considerable growth in certain fields. Private retailers may improve their business methods, however, because of this competition and particularly because of this expression of consumers' discontent with existing retailing methods.

CHAPTER EIGHTEEN

The insecure and handicapped: social security and public relief

Poverty has always plagued mankind. Even in the United States, despite its many advantages, large numbers of people always have lived below a humane minimum standard; many have suffered serious want; many more have been haunted by economic insecurity. As has been shown in earlier chapters, our economy has never yet produced, and still is not producing, enough to provide everyone with what most of us would consider a satisfactory standard of living. During serious depressions, such as that of the 1930's, poverty and insecurity have caused misery and worry beyond measure or description.

The programs and devices beneficial to wage earners, to farmers, and to consumers at large that we have just studied were not designed, nor have they operated, to help the poor as such—rationalizations and justifications to the contrary notwithstanding. Some persons in the lowest income groups have benefited from some of these programs. But the benefits of unionization—to take one example—have often gone to workers who already were relatively well off. In varying degrees the victories won by labor unions have (1) restricted opportunities of the least well-off workers, and intensified the competitive struggle for jobs open to the poor; (2) increased the prices (or retarded their fall as technology has improved) which all persons, including the poorest workers, must pay; and (3) cut the share of persons living on small incomes—widows, orphans, the aged, and the disabled. Again, agricultural policies have mainly benefited well-to-do commercial farmers and have made it harder, or sometimes even impossible, for the poorest farm families to make a decent living from the land; such policies have also raised the price of food and clothing to the poor wherever situated. The nation's tax system, to be discussed later, has made huge de-

mands on persons with large incomes; yet the poor have also been forced to pay, directly and indirectly, what for them are heavy taxes that intensify their poverty.

TRADITIONAL ATTITUDES TOWARD POVERTY

Society has not ignored the poor as such. Some community responsibility for the most unfortunate has ordinarily been recognized among civilized (and primitive) peoples. The family, defined very broadly, is usually the first line of defense against poverty; income and savings are shared; but too often they have proved inadequate. Voluntary charity, personal or organized (e.g., by religious organizations), is another means by which society tries to help the victims of poverty. Although the results often have been excellent, they also have been spotty, not always constructive (preventive or remedial), and in times of great need always inadequate. A third type of help has come from governments, in the United States chiefly from some unit of local government—e.g., institutional care for the destitute aged and for orphans, and public welfare grants for the very needy. Finally, governments have undertaken to give some income in kind regardless of ability and willingness to pay (education, some hospitalization and medical care, police protection, public parks). Although recognizing an obligation to help the very poor, the community often has regarded poverty as the fruit of the victims' own lack of initiative or thrift; assistance, it has been felt, should be kept at a minimum, hedged around with humiliating requirements to force the recipient to exert himself to find work and live frugally.

With such organization and attitudes America went through the prosperous 1920's without great social strain or too much obvious misery. But the deep and prolonged depression of the thirties forced the country to face a vastly greater problem of urgent human need (which it hoped was temporary) and led to new provisions for dealing with persisting long-run problems. The depression record will be surveyed briefly to illuminate the major difficulties of dealing with mass want. Then some permanent measures already taken will be reviewed, and certain remaining problem areas will be indicated.

MEETING NEEDS AT THE ONSET OF THE GREAT DEPRESSION

For a time some whose incomes shrank or disappeared, assisted in part by a substantial decline in living costs, supported themselves by economiz-

ing, drawing on savings, relying on credit and gifts, borrowing, and producing more for themselves. As a rule, however, resources quickly gave out. Resorting to the next line of defense, privately supported charity, they found the demands many times greater than the resources. Philanthropies, making desperate appeals for aid, found potential contributors with straitened incomes. The inadequacy of private charity was as obvious as was the impossibility of the unemployed relying on their own resources.

The remaining hope was government aid. During two years of deepening depression (1930-32) Washington gave no help. The problem was left to the states and municipalities, principally the latter. Yet tax receipts had fallen more rapidly than expenses could be cut, adequate new sources of revenue were not legally or economically available, debt limits had been reached, and the communities with the greatest need were those whose sources of income were most reduced. Some states assisted their local subdivisions, but in general the states themselves faced the same straitened circumstances. Some limitations, such as those on the size of the public debt and the level of tax rates, had been created by law and could have been changed by law. Others were political and social; agricultural or racial domination of state legislatures, for example, accounted for some of the reluctance to extend the maximum assistance possible to meet the needs of urban families or members of another race. Still other limitations stemmed from fundamental economic realities, such as the impossibility of collecting greater tax revenues from existing incomes without intensifying the depression, discouraging or driving away business or wealth, or penalizing the poor. In practice, only federal assistance (based ultimately on federal credit, broad taxing power, and control over the supply of money) remained as a feasible alternative.

In July 1932, with estimated unemployment ranging over twelve million, Congress authorized the Reconstruction Finance Corporation to lend (not to give, although later the loans were canceled) the states $300,000,000 for relief. This averaged about $34 for each family on relief, and apparently was to last for an indefinite period. Obviously it was inadequate.

FIRST RELIEF EFFORTS OF THE NEW DEAL

In 1933 the first Roosevelt Administration inherited a problem of mammoth proportions with no administrative organization to meet it, without detailed plans, and with a budgetary deficit. By this time, however, an overwhelming majority had come to favor additional temporary federal provi-

sion for the unemployed. Following proposals by the new President, Congress immediately set up the Federal Emergency Relief Administration with $250,000,000 to be granted to the states, one dollar for each three dollars provided by the states, and another $250,000,000 for states which could not match federal funds in that proportion. The Civilian Conservation Corps was established at the same time. Camps were set up for about three hundred thousand young men from families that were on relief. Undertaking forestry, conservation, and similar work, they received $30 a month, of which about $25 was sent to the families. Enrollment reached a peak of nearly half a million in September 1935.

EFFORTS TO "PRIME THE ECONOMIC PUMP"

The PWA. As part of the National Industrial Recovery Act, the Public Works Administration was set up to supervise the construction of needed public facilities, such as bridges, buildings, highways, and hospitals. Construction was undertaken by private contractors. Because of the absence at first of any detailed program, and of the insistence on careful planning and prevention of graft, actual work got under way very slowly; liquidation began in 1937, but, after the recession which occurred that fall, new funds were granted and the life of the organization extended to 1941. More than $4,000,000,000 of federal funds were allotted. Since grants to states and localities were matched in part, a total expenditure of $6,100,000,000 was attributable to the PWA. School buildings absorbed nearly 20 per cent of the total, streets and highways 15 per cent. In general there was a high standard of honesty in expenditure, and the funds made possible the creation of valuable public assets. The general objective was not so much to give aid to those who most needed it as to "prime the pump," revive business, and increase the volume of monetary circulation.

The CWA. By November 1933 it was obvious that actual expenditure of PWA funds would be made only slowly, that the NIRA expansion was failing, that if the pump was to be effectively primed, more expenditure was necessary, and that the fundamental relief problem remained. The Civil Works Administration was then inaugurated to give immediate aid. Within five months it was employing more than four million persons, and at the end of eight months it was terminated after having spent almost billion dollars. Fairly high wages were paid, and workers were not restricted to those who were on relief rolls or who could pass a means test. In some cases, private business could not compete with the wages and con

ditions offered on CWA, and many of the projects, hastily planned and of ephemeral value, received severe public condemnation.

THE WORK PROJECTS ADMINISTRATION

In the summer of 1935, at President Roosevelt's suggestion, Congress established a new basis for relief. State and local governments were to take care of needy unemployables (i.e., provide "relief"), while the federal government through the Work Projects Administration was to provide work for needy employables. Between its inauguration and June 1942, WPA employed at some time or other more than eight million individuals; in November 1938 there were well over three million on its payroll. By June 1942 it had spent approximately $10,500,000,000 for labor. It had an impressive list of achievements to its credit: 39,000 school buildings built or improved; 628,000 miles of roads and streets constructed or improved; 75,000 new bridges and viaducts; more than 5,000 new playgrounds and athletic fields; more than 200 hospitals; 26,000 miles of new sewers; 878,000,000 lunches served to school children; 360,000,000 garments made for the needy; 256 new landing fields; 450,000 acres of land reforested. During a *two-week* period in January 1940, 1,200,000 persons attended naturalization, vocational training, art, nursery, and similar classes; 17,000 smallpox, diphtheria, and other immunizations were completed; 243,000 medical and dental examinations and treatments were made; 1,100,000 persons attended 2,500 free musical performances. These figures illustrate both the scope and the diversity of the activities of WPA during its heyday. It was widely criticized for its art, cultural, and educational projects, yet such services can be as important for the community as essentially similar work done either privately or in public schools, or as work with bricks and mortar.

Projects were initiated and sponsored by nonfederal agencies, which bore a small part of the total cost—ordinarily the major portion of the expenditure for materials and supplies. A "security" wage, varying according to the type and location of the community and the work done, but not according to family need, was paid; the average in 1940 was about $57 a month with a high of $95 and a low of $31. In New York City the 1940 minimum was $52, the maximum $95. Workers were taken only from local relief rolls, but once employed they ordinarily were not subject to further investigation as to need. Only one member of a family might work at one time on WPA.

OTHER NEW DEAL RELIEF MEASURES

NYA. The National Youth Administration, established in 1935, assisted students in high schools, colleges, and graduate and professional schools of universities by providing funds for part-time employment, with average payments of about $4, $12, and $18 a month respectively. In addition youths from WPA families not in school were given various types of employment to acquire different vocational experience and skills. By September 1939, 219,000 so trained had been placed in private employment. In January 1941 there were approximately 900,000 recipients of NYA aid.

Surplus-food distribution. Through state welfare agencies the federal government also furnished to families on relief large quantities of food from the Federal Surplus Commodities Corporation. The original haphazard procedure was eventually replaced by the Food Order Stamp Plan by means of which surplus foods were distributed with some balance and regularity through grocery stores to relief and WPA families. In January 1941 nearly three million families were receiving aid averaging about $6.60 monthly through the food-stamp system.

General relief. In practice Congress did not grant WPA sufficient funds to care for all employables, and consequently the states and localities were forced to provide relief for many who were by no means unemployable. The relief provided by states and localities varied greatly; in some, demands were overwhelming, while in others the community was unwilling to carry a burden that should not have been impossible to bear. It is probable that only persons far removed from the details of the life of relief families would assert that society was meeting its obligations to its needy members.

ISSUES AND PROBLEMS OF RELIEF

Assistance standards and the market. Depression experience highlighted certain basic problems. One of the most vital problems encountered in planning aid for the needy is the conflict between alleviating the need and preventing or eliminating it. What may be done to meet certain needs decently and humanely may actually tend to accentuate and perpetuate the need.

If either the government or private charity attempts to provide the needy a decent minimum of subsistence, the provision will frequently exceed that which the recipients could secure by accepting employment in the labor market. Perhaps the wage standards in some industries are lower than they "ought" to be, and competition by the government may seem to pro-

vide a healthy stimulus. But the maximum net contribution or productivity of many individuals—especially the youngest and the oldest workers, the unskilled and the uneducated, the handicapped, the sick, and the shiftless—may simply not equal a decent minimum of subsistence for the workers and their dependents. This problem exists whether the method used is that of direct relief or of work relief. It is more than a question of willingness to work; it is a basic problem of poverty.

However, relief standards during the depression of the thirties were probably not high enough in general to justify serious concern that they acted as deterrents to private employment. Cases in which individuals on relief refused private employment can, of course, be cited; sometimes such cases hinged upon the relative certainty of relief payments as contrasted with the instability of private employment. Generally, one person's rejection of a job was offset by another's acceptance. Frequently the reason for job refusal seems to have been lack of necessary training or of physical strength. If private industry sometimes had difficulty in finding workers, that was due, with some exceptions, not so much to the generosity of relief standards, as to the scarcity of workers with the required qualifications and the inadequate organization of the employment exchanges.

Relief vs. *recovery*. Recognizing that recovery would reduce the need for relief, the New Deal attempted to stimulate business recovery. The merits of such an objective are obvious, but there is a danger that the most serious human claims will not be satisfied. To a considerable extent the beneficiaries of recovery may not be the most needy. Much of the additional employment (and hence income) may go to those already employed, either as overtime or as more continuous work. If we assume that in general the private employer discharges the most productive workers last and hires them back first, they, and not necessarily the most needy, will be the first to benefit from recovery. Widows, the aged, and the handicapped may be ignored. This is not to deny that, in a severe business depression, some degree of recovery is the first requirement for a reduction of relief needs. Yet even in 1941, despite a comparatively high level of business activity, much need persisted.

The place of private charity. How should responsibility for providing relief be shared between government agencies and private charities? The resources of private charities will remain inadequate even in periods of high prosperity. Yet these agencies have a role of great strategic importance in our society. Today their place in most communities is not so much to provide for basic relief needs as (1) to care for the unusual and exceptional needs of individual cases which a formal government agency with its neces-

sary rules and checks is ill-adapted to deal with, and (2) to pioneer in new fields of human service. Private charities can, for example, continue to provide the skilled, individual case work required in dealing with emotional problems, which are often no less important than economic ones.

FEDERAL, STATE, AND LOCAL PARTICIPATION IN RELIEF

How should the responsibility of the various governmental bodies for meeting basic needs be shared? States and localities did not meet the situation existing in the early years of the depression in the thirties, and there is little reason to believe that they would be substantially better able, or more willing, to shoulder the entire burden in another depression. Their burden in the late thirties, ostensibly that of carrying the unemployables, was practically that of carrying in addition many who were able and willing to work but for whom WPA had no funds. It is often difficult for states to raise adequate funds except by the use of some of the least desirable forms of taxes. In general the old rule holds—the greater the need, the less the community's ability to meet it. It was pointed out above that some state legislatures were unwilling to vote adequate funds for relief in urban regions or for certain racial groups. Yet administration by local agencies does offer the attractive possibility of wise adaptation of benefit to need, flexibility and economy in administration, community pressure to prevent malingering, and careful integration with private charity; the dangers lie in amateur, wasteful, and unimaginative execution, parsimony, and possible graft and corruption.

In prosperous times most states and localities will be able to provide reasonably well for the needy—but they may be unwilling. The effects of poverty are not limited to the area in which they originate. Even to persons not moved to action by the tragedy of human suffering itself, the knowledge that disease, ignorance, unrest, and subversion can easily cross state lines should prompt preventive action. The federal government may rightly be assigned at least two direct responsibilities: (1) to provide some funds to areas unable to finance their own relief, and (2) to induce or force all areas to meet minimum standards. A start has been made in such a program of federal grants-in-aid.

One charge against federal administration during the thirties was that it used its control of relief to further the political ends of the dominant party. The evidence produced failed to substantiate the charges, but dangerous potentialities obviously exist. What is not clear, however, is how

turning relief back to the states and localities would remedy the situation, except that, since the "out" party will ordinarily control some states, neither party will get all the benefit.

WORK RELIEF *VS.* DIRECT RELIEF

Another major problem is to determine how funds may be used to greatest advantage. Should they be given directly to the needy as a dole or spent in hiring men to do a job? All too frequently the policy chosen seems to have been penny-wise and pound-foolish. To some extent the responsibility must be placed upon the peculiar nature of public bookkeeping, which takes no account of the government's assets while focusing attention upon its liabilities; it sometimes seems that the public prefers to spend $10 and get no permanent asset than to spend $15 and get an asset worth $12 or $20. Another reason for the policy may have been that the primary emphasis placed on expenditure as such ("to get new money into circulation") rather than on what the expenditure was for. An even more important reason, however, has been the inability to spend large sums wisely and quickly on projects of lasting value. In the early period of the New Deal, the pressure to alleviate human need called above all else for speed, but the careful planning necessary to spend funds on permanent assets required months and years. The lack of well-formulated plans at the beginning of the depression, and the reluctance later to admit the necessity of planning on the assumption that unemployment might persist, must bear the main responsibility for the failure to get as much of permanent value as might have been obtained from the expenditures on work relief.

The WPA was designed to provide aid by giving jobs (work relief) rather than a dole (direct relief). A few of its most general problems are listed below.

1. Almost all useful projects involve expenditure for materials as well as for labor; therefore, for any given relief expenditure, direct relief will give a larger amount of immediate assistance where it is most needed than will work relief.

2. It may be difficult to find projects with the same geographical distribution as unemployment; streets, highways, school buildings, and hospitals, however, will ordinarily qualify.

3. Nearly any project of more than nominal value to the community will require some skilled workers and technicians, who may not be in need of relief; this consideration should certainly not be controlling, but its solution raises such difficult problems as the relative rates of remuneration of

skilled and unskilled, and of needy and non-needy workers. The WPA's achievements could probably have been greater had it not been for the limitation of employees to persons on relief and for the lack of federal funds for materials.

4. Many of the persons most in need will be the least competent, i.e., those whose productivity is lowest.

5. Promising projects will sometimes be rejected because of their potential competition with private business.

THE ADMINISTRATION OF RELIEF

The success of a relief program obviously depends upon the honesty, competence, and economy of its administration. The United States entered the thirties with many large areas in which there were no professional social-work or public-welfare organizations, while in other areas staffs were inadequate or lacked the independence necessary for best results. There was no comprehensive plan. Yet a tremendous task had to be performed—and quickly. *Ad hoc* arrangements were made. The public refused to admit that relief might be a persisting problem; in consequence the setting up of adequate staffs was repeatedly postponed. The unwillingness to appropriate adequate funds for temporary staffs and the shortage of professionally competent personnel further complicated the problem. In some cases the desire to keep relief administration under political control impeded progress.

Relief appropriations frequently limited the amounts to be spent for administration. As a result staff members directly in touch with families on relief had case loads so far in excess of what they could efficiently carry that it was physically impossible to investigate adequately and continuously, to say nothing of doing the more advanced case work which some relief families badly needed. Once the local relief agencies had certified families to WPA, the case work ordinarily ended; if other members of the family secured work, or if the worker himself secured part-time employment, the WPA organization had no way of discovering the change. Competent case work requires special ability and professional training, for which adequate salary, satisfactory working conditions, and reasonable security in employment must be offered.

POLITICAL ABUSES CONNECTED WITH RELIEF

As suggested earlier, much dissatisfaction with relief resulted from the connections that its allocation and administration sometimes had with the

less desirable aspects of politics. The existence of tremendous sums to be spent produced intense competition to secure them for particular regions, projects, and persons. It was charged that allocations were made on the basis, not of the human good they would do, but of their political effect. The extent of the abuses was never publicly determined, but it is clear that a serious and difficult problem existed. Some discretion is necessary. Costs of living vary so that payments that are adequate for one region or type of community are quite inadequate for another. Some communities suffer far more at some times than at others, so that the use of simple and fixed formulas for allocating federal funds to areas cannot be expected to bring best results. The assignment of persons to work-relief jobs and the award of special funds for special needs inevitably calls for discretion and for special attention to individual cases, opening the way for favoritism on the one hand and for flexible adaptation of benefit to need on the other. The best solution of both broad, general problems and small, personal problems requires a measure of discretion and latitude of administrative judgment.

In some areas the relief allowance was often inadequate to cover rent fully or consistently; either humane considerations or legal provisions restricted landlords from evicting families when rent was not paid. Consequently, an undue portion of the true cost of relief was sometimes placed on certain landlords. Another problem was whether relief should be granted in goods directly—to assure that the funds are used to good advantage—or in money. In many states no adequate provision was made for persons who were not citizens of the particular state, and because of residence requirements—often as much as two or three years—itinerants seldom received even meager relief. Another question was whether adults on relief were to be deprived of the right to vote; states have the constitutional power to withdraw the franchise. But to do so seems antagonistic to fundamental tenets of democracy, even though the argument was advanced vigorously that persons on relief should have no voice in determining the amount or the administration of relief.

THE RELIEF PROBLEM OF THE FUTURE

As this is written, the problem of persisting mass unemployment seems remote. There is good reason to hope that we shall not repeat the mistakes that brought on the tragic depression of the thirties. If mass relief becomes a problem again, the experience of the New Deal should permit more humane, more prompt, and more effective aid than before.

The problem of individual distress remains, and cannot be expected to vanish even with high and sustained prosperity. Millions of families will not have enough income to provide adequately for loss of earning power—due to sickness, unemployment, or old age—or extraordinary expenses such as those caused by sickness. Some will not have the will to make such provision. Private charity must continue to play a vital role in helping extreme and exceptional cases, and in testing new methods of help and prevention. For the great majority of cases, however, a start toward providing systematic aid has been made in the social security system.

THE OBJECTIVE AND THE METHOD OF SOCIAL SECURITY

Leading European industrial nations undertook, during the decades preceding World War I, to provide through the agency of government a minimum standard of economic security for large sections of the working population. In the United States the need for such action was less apparent and in a sense less urgent. Yet the market system evolved no method of providing a standard minimum of security. The depression of the thirties, however, dramatized the need for action. Vigorous New Deal leadership made capital of the situation, and in 1935 the Social Security Act was passed.

The act (which has since been revised) established two major programs to make partial provision for the economic need arising out of (1) old age, and (2) involuntary unemployment;[1] it also made some provision for dealing with other more limited, though no less important, phases of economic insecurity.

OLD-AGE INSURANCE PROVISIONS OF SOCIAL SECURITY

The Old-Age and Survivors' Insurance program is administered solely by the federal government. Coverage is very broad; the major exceptions are workers in agriculture, domestic servants, workers in governmental and nonprofit organizations, casual labor, newsboys under eighteen, and a few others. Every three months each employer of insured workers must remit to the Federal Treasury taxes based on the wages paid to such employees; 1 per cent is deducted from the wages, up to $3,000 annually, of all insured persons, and a similar tax is imposed on the employer. Although the 1 per cent rate was to have been raised automatically several times, Congress has

[1] Railroad employees used their substantial political influence to get a special program with far more generous benefits and entailing many times heavier burdens for their employers.

each time postponed the increase. Under present schedules the rate is to rise in the 1950's to 3 per cent each on employers and employees. Every "covered" worker is assigned a number, and a record is kept of all payments made on his account.

Insured persons reaching sixty-five years of age become eligible for old-age benefits if they have earned $50 in covered employment in each of forty quarters (ten years) after 1936. The benefit, payable for life, is determined according to a formula based on covered earnings and length of coverage. First the average monthly wage during the period of coverage is computed. The resulting benefit is then (1) 40 per cent of the first $50 of the average monthly wage ($20), plus (2) 10 per cent of the next $200 (a maximum of $20), plus (3) 1 per cent of the sum of (1) and (2) for each year in which the worker earned more than $200. In addition, he receives for his wife if she is over sixty-five and for each dependent unmarried child under sixteen (or if the child is attending school) a sum equal to one-half of his benefit. After reaching sixty-five, an insured person receives benefits only if he no longer works in any occupation covered by the act; no benefits are paid to or for any person who is employed and earning more than $15 a month in covered employment. The minimum monthly benefit is $10, while the maximum that may be paid to a family amounts to $85.

A single man with twenty years of coverage at an average monthly wage of $100 would receive $30, a married man $45; forty years coverage at the same rate would yield $35 to a single individual and $52.50 to a married couple. If a single person's average monthly wage for forty years had been $250, his monthly benefit would amount to $56. Benefits in the lower ranges of wages and length of employment are more generous relative to the worker's contributions than in the upper ranges. Monthly benefits are provided to (1) widows who are over sixty-five or who have dependent children, and (2) dependent parents or dependent unmarried children. Some survivors receive three-quarters, others one-half the standard benefit due the decedent. Covered workers who cannot qualify for benefits receive a lump-sum payment.

There are other less important provisions regarding benefits. No person is compelled to retire at the age of sixty-five. Benefits are paid regardless of the recipient's other financial resources, such as savings or income from investments or annuities; but—as was pointed out above—no benefit is allowed to anyone earning over $15 a month in covered employment. This exception is open to criticism; the benefit received may be insufficient to provide for basic needs, and attempts to supplement it should hardly result

in its loss when the supplement is as low as $15 a month, or even when it is substantially higher.

The administration of this portion of the act involves keeping tens of millions of individual records, a mammoth task and one which many predicted could not be carried out successfully. However, the record-keeping is highly mechanized, centralized, and not unduly expensive. No investigation of the worker's economic condition is necessary. Some administrative cost falls upon employers, who must file returns which require extra bookkeeping and computation. Early in 1949, about 2,300,000 persons (or families) were receiving retirement and survivors' benefits.

CRITICISMS OF OLD-AGE PROVISIONS

Little objection is now raised to the basic purpose of the act—making some financial provision for old age—but certain features have been criticized. The exclusion from coverage of large groups of low-income workers is considered by many a serious defect. The primary difficulty of extending coverage is the administrative burden involved (plus some employer resistance to the tax costs). Securing wage reports and tax receipts from several million farmers and from small and transitory firms and households would be extremely difficult.

The compulsory nature of the program elicited some criticism from persons preferring to maintain the principle of self-reliance in providing for economic needs, which long had been the traditional American attitude. Careful students of the matter believe, however, that millions of people, if left to their own resources, will be unable to make any systematic provision for old age, because the inadequacy of their incomes makes it difficult and often impossible to save any substantial amount. Increasing urbanization has made it more difficult for older members of the family to contribute to its income by useful labor in the home or on the farm. Then too, the average family today has fewer children than it did a generation ago; consequently there are fewer earners to support retired parents. The social security program is not inconsistent with private pension schemes; from the employee's point of view it even has definite advantages. Continuous employment by the same firm is not a requisite for receiving benefits, nor is the worker penalized in any manner if he elects to change his job.

More serious criticisms have been directed against the methods of financing the program. The pay-roll tax levied to secure funds for both the old-age and the unemployment-benefit programs (the latter to be discussed below) has been deplored both because of financial hardship that may be

imposed upon insured persons, and because of difficulties associated with the accumulation of large reserves for insurance purposes. Both of these criticisms will be considered briefly.

POSSIBLE HARDSHIPS FOR INSURED PERSONS

Many of the employees covered by social security earn such low incomes that any deductions therefrom must result in some sacrifice of the necessities of life. Also the employer's share of the tax burden may be shifted to the worker, at least in those sections of industry where the competition for jobs is especially severe. This could happen through a cut in wages, or through a failure of wages to rise when they otherwise would have done so. A tax on pay rolls, moreover, is one that can be escaped by reducing employment, either by substituting capital for labor or by curtailing output. Those products requiring relatively little labor will be less affected than those requiring a large amount. The tax will ordinarily be a cost which must be covered by selling prices. Consumers will pay in the form of higher prices; even families that are not covered will contribute indirectly in this way.

Furthermore, an increase in price may reduce the quantity of sales and hence the volume of employment. A tax rate of 1 or 2 per cent on pay rolls may have little effect on employment, but eventually the total social security tax on the employer will rise to 6 per cent (in addition to the tax of 3 per cent on the worker), a large enough figure for its effects to warrant serious consideration. When unemployment looms as a serious social problem, a tax on pay rolls may only aggravate the situation. This form of taxation was chosen as a means of adjusting cost and benefit on what seemed an ethically satisfactory and politically feasible basis. It has however been argued, both on grounds of equity, and because of possible reactions upon the level of employment, that the use of the graduated personal income tax would have been much wiser. Yet unless all persons are covered, the use of general funds to pay benefits is difficult to justify.

POSSIBLE EFFECTS OF ACCUMULATING A RESERVE

The second serious criticism, of methods of financing social security, concerns the creation of a large reserve, originally estimated to reach about 47,000,000,000. The benefits that will fall due in the future will obviously reach far higher totals than those paid at the start; as time passes more workers will qualify, and, because of the longer average period of coverage

their average benefit will be greater. Unless more is collected in the early years than is required for the relatively small total of benefits then due, an extremely high tax will be necessary to carry the increased burden in the future. Furthermore, if workers are to benefit according to their contributions, they must make provision in the years when they are employed. Consequently, for some time to come payments into the fund will greatly exceed disbursements in the form of benefits. The accumulation of reserve that is now planned contemplates one smaller than was aimed at in the original act. Early in 1949, the reserve fund contained about $12,000,000,000 (including railroad retirement reserves). The funds of the reserve are assets which earn interest. As time passes, benefits paid out will increase, and finally they will exceed the sums being received from social security taxes, but the interest on the accumulation is expected to make up part of the difference, so that the charge on the Treasury's general revenues will not be excessive. The capital of the fund is to remain intact, invested in United States government bonds or guaranteed obligations, with no fixed rate of interest specified.

The reserve fund was originally condemned as deflationary; it was argued that it withdraws from circulation a large volume of purchasing power which otherwise would be used to buy consumers' goods and accumulates it in a huge capital fund which will never be entirely paid out. When an increase in the volume of consumers' purchasing power and a decrease in the proportion of the national income saved seemed to be important social objectives, this huge forced-saving scheme appeared unwise to many. Later, during the period of wartime inflationary threat, the accumulation of the reserve was welcomed by fiscal experts, but this may be a temporary condition. Alternative methods of providing for the greater needs of the future are not readily apparent unless more of the cost is to be thrown on the general taxpayer, to the detriment of persons not scheduled to receive benefits.

Another feature of the reserve fund that has been singled out for criticism is that the funds collected in taxes have been used for current public expenditures, the reserve account receiving only the IOU's of the government. If the fact that current receipts from the social security taxes exceed benefit payments encouraged Congress to authorize more spending than it otherwise would, because of the ease of borrowing from the reserve fund, there might be some reason to fear that no economic asset is being accumulated to sustain future costs. To date, however, this criticism has probably not been justified. Were it not for the social security tax collections and their use to purchase government obligations for the reserve account, Con-

gressional appropriations, which would probably have been no smaller, could have been financed only by greater sales of government debt to the public. It is immaterial to taxpayers whether they are paying interest on debt to private owners or to the social security reserve account.

Several other minor criticisms reduce essentially to the view that since the program is subject to political manipulation, being the creature of Congress, it can give no reliable assurance of future security—which means that either the insured or the taxpayers are to be imposed upon. The existence of this danger cannot be denied. The basic safeguards are political caution, awareness, and honesty.

UNEMPLOYMENT COMPENSATION

The Social Security Act also provides for federal co-operation with the tates in providing unemployment compensation. A federal pay-roll tax of per cent (except on annual wages in excess of $3,000 per employee) is evied on all employers of eight or more persons with the same important xceptions as apply to the old-age benefit program. However, up to 90 per ent of this tax may be deducted as credit granted by the federal governent to state unemployment insurance funds. This crediting device constiutes an effective method of federal compulsion on the states to set up nemployment-compensation schemes; by failing to do so a state cannot ive its employers a competitive advantage over employers of those states ith compensation programs. This is for the reason that (with minor exeptions) the total tax, federal and state, is the same in all states. Yet no enefits are paid from the federal collections; payments are made only from ate funds. If a state institutes no such program, its employers must still ay the tax, but its workers receive no benefits. Consequently, all states ave initiated unemployment-benefit programs.

To qualify for the credit, the state program must meet certain federal quirements; some degree of uniformity and some assurance of minimum andards can thus be assured. Variety, experimentation, and extensive local ntrol exist under the rules now in effect.

Many different formulas are used for computing benefits, some of ggering complexity, and most of them too difficult for many workers to derstand. The period between the end of employment and the beginning benefit payments, the waiting period, is usually two or three weeks. certain minimum period of employment (e.g., ten weeks within the preding year) is usually required. Benefit payments vary according to previous earnings and length of employment, with a maximum weekly benefit

of somewhat more than $20 and a minimum of $5; provision is made, however, for some benefit in case of partial unemployment. Benefit payments are in most cases limited to a period of fourteen or sixteen weeks and, in addition, to a percentage of previous earnings. No benefits are payable to employees who quit work voluntarily, or who are discharged for misconduct; workers who go out on strike ordinarily must wait longer for benefits and in some states are denied them entirely; special provision is made for seasonal, casual, and temporary unemployment. All costs of administration are borne by the federal government. There have been established (under other legislation) about 1,500 full-time and 3,100 part-time and itinerant employment offices at which workers claiming benefits must register; if suitable work is available, no benefit is payable. The particular features of the program, it should be repeated, vary widely among the states.

By early 1949, funds in state (and the railroad program) accounts available for the payment of unemployment benefits exceeded $8,300,000,000; this huge sum will help greatly in cushioning the shock of unemployment and maintain purchasing power if a business recession starts. Average weekly benefits paid during late 1947 amounted to about $18 for each recipient. From the initiation of the program to early 1949, $5,800,000,000 was paid in benefits. Late in 1948, recipients of benefits totaled well under one million (veterans covered by a special program not included).

CONTROVERSY OVER UNEMPLOYMENT PROVISIONS

Although there is little dispute as to the desirability of making some systematic provision for the victims of unemployment, there are several controversial aspects of the present act. As with the old-age provisions, the benefits are financed from pay-roll taxes; some criticisms of this method of finance have already been noted. Another controversy centers around the question of whether the system should be used to decrease unemployment, i.e., to remedy as well as to alleviate. States are permitted to establish a scale of "merit ratings" designed to encourage steadier employment. Almost all states have chosen to do this. Firms that offer fairly regular employment are assessed at a lower—often a much lower—tax rate. There are two arguments supporting such a concession. One is that firms providing regular employment contribute little to the social costs of unemployment and should therefore not be compelled to bear as heavy a tax burden as other enterprises whose demand for labor is less stable. The second is that by offering the prospect of a tax reduction—one that is often very large in

relation to profits—the government can induce firms to stabilize their employment.

Both arguments have some validity, but merit-rating schemes as they have so far developed leave much to be desired. In the first place, if the tax on firms with stable employment is reduced significantly, the major cost of the program will be thrown on other concerns, ordinarily those least able to bear the burden; an insurance scheme eliminating the good risks and including only the bad ones can hardly remain solvent unless rates are raised proportionately. But the typical merit-rating scheme provides only for the reduction of rates applying to some firms and not for a corresponding increase of others; the maximum rate remains in all but a very few cases 3 per cent, and some question arises as to its adequacy for periods of large and sustained unemployment. The second objection is that such employment stabilization as may be secured through differential contribution is apt to be limited in amount and of doubtful value; thus it may mean only more work for some and none at all for others.

THE UNEMPLOYMENT BENEFITS

The provisions for payment of benefits require further consideration. As yet there is little general agreement as to what the benefits are to accomplish, how they are to be integrated with various forms of federal and state relief, and whether they should be entirely separate from the question of need or should vary with the number of dependents and the cost of living. Further study might well disclose new ways of increasing the social value of the program. The present arrangement cannot even claim the advantage of simplicity. For example, benefit payments, including those falling within the lowest ranges—$17 or less in most states—are adjusted to a scale based on past earnings. This adjustment requires the keeping of detailed records for each covered worker and involves what is often a difficult task of computation, adding administrative expenses quite out of proportion to the difference between the benefit so computed and the general average. The British method of paying a fixed benefit plus supplements for dependents is far simpler and cheaper to administer. Its results may approximate the fundamental objective, that of providing for the needs of the unemployed, as satisfactorily as do payments which vary slightly with earnings.

Although the federal government provides the funds for administration, in practice its power to compel observance of high standards and to require economy of operation has been limited; a wide area of independence has been left to the states. Gradually state staffs are being put on the

civil-service merit system, but there has been, apparently, effective opposition to removing the jobs involved from political control. Even the civil-service merit system does not of itself insure competent, enlightened, economical administration. Moreover, the work of the employment bureaus could well be expanded and integrated more closely with the benefit system.

No provision is now made for federal reinsurance of state systems. Yet some such scheme may eventually be desirable to assure benefit payments in case of serious need. In states where unemployment may be especially heavy or protracted, the funds accumulated could prove inadequate. Part of the tax collections might well be used to build up a central fund upon which state funds under strain could draw.

Another issue is the payment of benefits to persons on strike. Unions naturally favor strongly such payments, because the bargaining power of the striker is increased by any measure that reduces economic pressure to return to work. But the explicit public purpose to be served by this section of the Social Security Act was not that of adding to the bargaining strength of unions (this was done by other enactments of Congress). Moreover, payment of benefits to strikers runs counter to the insurance principle and depletes funds which may be required for meeting future unemployment of a kind which is—in a much stricter sense of the term—unavoidable. Other forms of public aid, such as relief, ordinarily are available to meet the most pressing needs of families of workers involved in labor disputes.

OTHER PROVISIONS OF THE SECURITY PROGRAM

The other features of the social security program, while less ambitious, are intended to meet to some extent the needs of certain groups unable to provide for themselves. Federal aid is granted only through state agencies and only on a matching basis, i.e., on condition that the state also contributes. State programs and administration must be approved by the Social Security Board.

Old-age assistance. One section of the Social Security Act provides that the federal government will match (on a variable scale) grants made by the states to needy aged to a maximum of $45 as the total state-federal grant. In November 1948, 2,500,000 persons were receiving aid under this provision, but the average total benefit was only $40 a month, with Mississippi paying the lowest benefit, $16, and Colorado the highest, $78. New York paid $50. Why have the states not secured all the funds which the federal government offers to give them? The answer is that the states (and sometimes the localities on which the states have placed part of the burden of

matching funds) have in some cases felt unable, and in others unwilling, to impose sufficiently heavy taxes to meet the maximum federal offer.

The benefits paid have unquestionably been of tremendous value in many cases, but they have by no means solved the economic problem of the needy aged. In many states there are more persons over sixty-five (half the recipients are seventy-four or over) in need of some assistance than are receiving it, and in no state can the aid actually offered be said to assure what would seem to be a reasonable minimum standard of living. In some states, an aged couple living together might possibly manage if special diets and medical care are not required.

For some years the number of aged will increase steadily; some will continue to work, others will have reserves of their own, but many will be able to exist only if they receive some measure of help from private charity or the government. In accordance with the trend of population described in Chapter 3, the number of aged persons will become so great as to create a large problem, one never before faced in this country. There seems to be no possibility that private charity will be able to fill the need. The demands on the government, reflected in such powerful movements as the Townsend Plan, probably will grow, even with sustained prosperity. Gradually, the provisions of the old-age insurance division of the social security program will carry more and more of the burden, but increased demands based on serious human need must be expected, especially from groups not covered by the program. The potential cost of even modest provisions, such as $40 a month for a person over sixty-five, is startlingly high.

Without significant added cost the human benefit yielded could probably be increased if the recipients of aid were allowed greater freedom of movement. Individual states are, for good reason, reluctant to grant pensions except to those who have resided in the state for some years. A person nearing the pension age may well hesitate to move to areas with more promising economic prospects or where friends and relatives are located, but where he might be in danger of losing his pension rights or where they would be worth far less. Furthermore, some localities are more attractive and less expensive than others for retirement.

Aid to mothers, the blind, etc. Other phases of the program provide for federal grants-in-aid to states to help the blind, to aid seriously needy families with dependent children, to provide a small amount of maternal and child-health care, to care for crippled, homeless, or neglected children, to support in a small way public-health services, and to establish and maintain vocational rehabilitation projects. Almost all states and territories have

initiated approved programs, and a great many lives have undoubtedly been made happier and more useful. Late in 1948 about two million persons were receiving direct benefits under these services. In most cases, however, the need far exceeds the accomplishments which are possible with the limited funds appropriated.

THE NEED FOR IMPROVEMENT OF HEALTH

Substantial deficiencies in the present social security program stem largely from the magnitude of the basic needs. Prosperity has both reduced needs and facilitated meeting them. But pressing needs remain. In fact, from the point of view of the community's welfare, it may prove to be the poorest kind of economy not to expand the program in certain directions that already are fairly clear. Probably the most obvious need is an improvement of the general health standards of the country.

Health is as fundamental to a free, progressive, prosperous, and happy society as is education. This country has long recognized the desirability and the necessity of providing everyone with at least a minimum of education and an opportunity to secure more if desired, although often the achievements have fallen far below the goal. The social, to say nothing of the humane, arguments for providing minimum opportunities for good health seem no less persuasive. Yet appalling conditions testify to our failure. The medical examinations of men selected for the armed forces, a fairly representative cross section, disclosed the existence of a large amount of preventable disease, impairment, and disability; five million, nearly 30 per cent of all male registrants, were rejected as medically unfit.

A few facts will illustrate the situation. Hundreds of thousands of mothers receive no doctor's assistance at childbirth, and even more receive no adequate prenatal care. Thousands of preventable maternal and infant deaths occur every year. A total of fifteen million people live in counties possessing either no hospitals of any kind, or hospitals not meeting minimum professional standards, while millions more cannot afford such service as is available. Forty million people live in communities lacking full-time local public health services. Few of the families with the lowest incomes and the largest number of children can afford adequate medical and dental care. In 1939 about one out of four children ill for more than a week received no medical care. Facilities for treating mental illness, especially in earlier and less serious stages, are available to only a very small portion of those who could benefit from the progress of psychiatry; there are probably two million mentally ill in the United States and ten million who some-

ime during their lifetime will need some hospitalization because of mental llness. Though care is pitifully inadequate, taxpayers spend more than 3500,000,000 a year on the mentally ill, very little of which goes for re-earch and prevention.

'HE PROVISION OF MEDICAL AND HEALTH SERVICES

The science of medicine has made tremendous strides during the last 'ew decades. Yet the developments have been made available to only a part)f the population. Although it often is said that the very wealthy and the 'ery poor receive good care, there is little evidence to show that all of the)oor in fact obtain adequate services. The ways in which medical and lental services are marketed leave the patient bewildered; he seldom is able o judge professional competence, and often he has no alternative but to ccept such treatments as are offered.

Purely on the basis of the general economic interest of society, there is eed for the extension of at least minimum opportunities for medical care o all who need it; national productivity would be increased, and future abilities in the way of caring for the needy would be reduced. The argu-ients for this in terms of dollars and cents are formidable, and humane onsiderations should have even greater weight.

Governmental bodies now are spending about one billion dollars a year or public health (excluding the Army, Navy, and Veterans Administra-on) and are providing for a large proportion of total hospitalization, prin-ipally through institutions for mental illness, tuberculosis, and the ill among ie very poor. Doubling or trebling this sum would be inadequate to meet urrent needs, but would, eventually, achieve large results. Several years 'ould be required to expand adequately the present limited facilities. The ipplies of physicians, dentists, nurses, and other skilled personnel are far)o small to meet the potential need. The medical ranks are strictly limited : present by control over entry into the profession.

The tendency artificially to limit the number of physicians has arisen)t so much because human needs do not call for greater amounts of med-al service, as because many with the most urgent needs are unable to pay)r what they require on the scale desired by the medical profession. The gh earnings of some physicians help make the profession attractive. Yet ie proportion of this professional group to the total population has fallen iring recent decades so that today the typical physician cares for five per-ns for every four served by the typical physician of 1900. The present pply of hospitals and specialized equipment is

distributed among different sections. Many physicians now in practice could be of far greater value to their communities if they received some postgraduate training; recent developments, such as knowledge of relations between physical and mental or emotional illness, have occurred since many now practicing were in medical school. Medical research could be expanded greatly, but Congress and the states have too frequently resisted large-scale governmental assistance for such research. Discoveries in the field of medicine might be made public property; at present their utilization is sometimes restricted by high prices made possible through monopolistic control. This control, in turn, often rests upon patents granted by the federal government.

Medical services are now so marketed that the person who is ill can "economize" without realizing sufficiently the risks of parsimony. The unpredictable impact of need finds many a family short of funds when they could be used to the best advantage. For such persons new forms of voluntary insurance in certain cities have permitted millions of families to cover a certain part of their potential hospital costs through small monthly payments. Despite initial opposition, the medical associations have come to favor such plans. Programs of this sort have amply demonstrated the willingness and ability of certain groups to insure against some of the costs of illness. Extension of the principle to cover physicians' fees can be arranged, and a start has already been made. Physicians as a group would almost certainly benefit, for example, from the prompt collection of fees. It would be possible to put dental services on a similar basis. One outcome would probably be that the insured would make substantially greater use of the services of physicians and dentists, in which case the understaffing of the two professions—and especially of the former—might become more apparent than it now is. However, the present voluntary schemes in this country still lie beyond the reach of millions of families, and for such families some form of government assistance seems to be required.

This chapter's discussion of the case of the insecure and handicapped has presented grounds for expanding the practical recognition of community responsibility. No attempt has been made to indicate how far the expansion should extend; to determine the ideal limits would require greater knowledge than there now is of the social values to be gained and of the social cost to be borne. The social values involved are the health, efficiency, stability, and security of a large proportion of our human resources. The social costs take the more tangible form of pecuniary outlays. How far we can afford to go is obviously a controlling question. But how far we can afford *not* to go is, even if less obviously, an equally controlling question.

SECTION SIX

OUR SYSTEM OF MONEY AND CREDIT

19 Money and credit

20 Commercial banks and the Federal Reserve System

21 Money, banking, and public policy

22 How corporations are financed

23 The security markets

ECTION SIX

OUR SYSTEM OF MONEY AND CREDIT

NTRODUCTION

The preceding sections have dealt with productive resources, with production and incomes, with the problems of labor, farmers, consumers, and the poor, and with the way in which economic activity is organized through business enterprises. The present section describes and analyzes another organizing device, the system of money and credit. Money is the *medium* in which most economic behavior is expressed. It also is the only *measure* by which most of this behavior can be described.

Credit, the correlative of money, consists of rights which are given by persons or groups of persons to others, in return for a consideration, to demand money in the future. Most of the goods and services that are bought and sold in the market are exchanged for some kind of credit. For many special purposes of economic analysis it is important that a careful distinction be drawn between money and credit. But since rights to receive money in the future are given and accepted in the market just as money is given and accepted, credit is, in a broader sense, a form of money. And, since the present section is concerned with the most general qualitative and quantitative aspects of money, it is appropriate here to regard credit in this broader sense as a form of money.

Simply because money is the medium in terms of which exchanges take place, contracts are drawn, and debt is incurred, the monetary system is of great importance to every person and to the community at large. The only test of a "good" or "bad" monetary system is how well it works. D. H. Robertson has pointed out that "a monetary system is like a liver: it does not take up very much of our thoughts when it goes right, but it attracts a deal of attention when it goes wrong." Recently our monetary system

has been attracting "a deal of attention." This is due to the fact that the value of money—its purchasing power, or ability to command other things in exchange—has changed very rapidly and very much. This large and rapid change has affected the stability of the entire economic structure and the security of every person and every group.

It is extremely easy either to exaggerate or to underestimate the importance of money. Since it is the medium in which the exchange values of other things are expressed, people often have attributed to money a peculiar —almost a mystical—importance. It is true, of course, that the more money an individual has, other things being equal, the better his economic situation is. It does not follow, however, that the more money a nation has, other things being equal, the better off it is. A nation's wealth consists of the goods available to people and of its capacity in land, machinery, buildings, manpower, intelligence, and skill to produce more goods. A nation which had all the money in the world and little of the resources named above would be poor indeed.

Once this is clearly perceived, it becomes easy to underestimate the importance of money. Both the quantity and quality of money (and these conditions affect each other) have important relations to the trade and the production of a nation. A rapid increase in the amount of money in circulation may lead fairly quickly to an increase in the volumes of physical production and trade. And, in a longer period of time, it may lead also to a stagnation of production and trade and to a disturbance of normal economic relationships resulting in material losses which are greater than the earlier material gains. A good system of money—which includes all phases of national monetary policy—is one which will facilitate an optimum use of productive resources and a set of stable relationships among buyers and sellers, debtors and creditors, producers and consumers.

HAPTER NINETEEN

Money and credit

HE MONEY ECONOMY

The features of modern economic life which distinguish it most sharply rom more primitive forms of organization are (1) the minute division of ıbor which exists, and (2) the intricate system of exchange which is a ecessary accompaniment of any such division of labor. This minute division of labor and this intricate system of exchange have given rise to a broad ıattern of organization which we may call "the money economy." We may o call it because the economic activities of people consist most directly in ;etting and spending *money* incomes. It must immediately be clear that uch a form of organization differs markedly from, for example, that of a nanor of the Middle Ages in which people produced almost all that they :onsumed and consumed almost all that they produced. Although the disinction is somewhat obvious, our minds have become so conditioned by he money economy, and we have become so habituated to it, that most of ıs seldom realize the implications of this mode of economic organization o our material conditions of life.

Without the use of money it would not be possible to produce the va-iety or the quantity of goods that we now have, simply because it would ıot be possible to have any elaborate division of labor. It is patent that our ives—in fact, our very chances of living at all—would be greatly narrowed f each of us had to depend directly and exclusively on his own efforts to ;ecure a livelihood. Indeed, some mode of exchanging goods and services is ın essential characteristic of every society. And no method of barter could ɔe as flexible, or yield itself as completely to mutually beneficial co-operaıion, as does the system of making and spending money incomes.

Another positive aspect of the money economy is that it promotes genuine liberty in the sense that it offers people opportunities to choose—opportunities which could not conceivably exist in any other system of economic organization. No serious proposals of economic reform contemplate doing away with the money economy; they propose instead to change the institutions associated with this broad use of money. After the revolution of 1917, an attempt was indeed made by the Bolsheviks to abolish the use of money, but the resulting chaos soon led to its reintroduction. In Soviet Russia, as in the United States, the direct economic activities of people consist in making and spending money incomes. In both countries people prosper or languish according to their abilities to secure money incomes and to spend the money they have for the things they want.

Now money does not furnish these advantages automatically. The test of a "good" or a "bad" monetary system is how well it works. In order to evaluate our monetary system and to appreciate the problems which are connected with it, we must, therefore, consider the functions of money and the qualities which a money should have in order to perform these functions satisfactorily. In general, the functions of money are to act as (1) a standard of value, (2) a medium of exchange, and (3) a store of value.

MONEY AS A STANDARD OF VALUE

Consider, first, the function of money as a standard or measure of value. Almost every exchange of goods and services involves a price and that price is expressed in terms of money. Even where no money changes hands, as in the case of a worker who receives part of his remuneration in "keep," the transaction usually takes the form of an exchange of values which are thought of and expressed in monetary terms. In the example given, the "keep" of the worker represents a cost to the employer and an income to the worker; both parties to the transaction compare the value of the "keep" to the value of the work which it remunerates. For this comparison to be made, it is necessary to reduce both values to a common denominator, money. In like manner money serves as a common denominator when we are expressing the value of one thing in relation to another; when, for example, someone tells us that a particular pair of shoes is "worth" two particular hats we take it to mean that the shoes will sell for as much money as both hats. That is, we state the *relative values* of different goods and services in terms of their respective prices. Without this convenient medium of calculation it would be impossible to make the complicated trans-

ctions which our kind of economic system necessarily entails. Our whole ystem of prices and business accounting is based on such monetary ex- ›ressions of values.

'HE UNIT OF ACCOUNT

The unit in which these values are expressed is a legal concept. In the Jnited States the unit, or common denominator, of value is the "dollar." It s by reference to this "unit of account" that we express the relative values ›f goods and services. The various kinds of money which are used in a :ountry, such as bank notes and coins, are multiples or submultiples of this tandard unit of account.

Frequently, the unit of account is defined in terms of a certain amount ›f some precious metal; at other times or in other countries the money unit s an "ideal" concept in the sense that it is stated without reference to any ›articular commodity. When the unit of account is defined in terms of a :ertain amount of gold and when the money itself can be converted at will nto gold, as when the gold standard operates, we can say that the monetary system has a "real commodity" basis. Such an arrangement is sometimes referred to as a "hard money" system. When, however, the unit of ccount is defined without reference to any particular commodity (such as ;old), or when the paper money in common use cannot be converted into lefinite amounts of such a commodity, we have a system in which the nonetary unit is a purely abstract concept.

When the money of a nation is dissociated from any commodity, the 'alue of money over periods of time depends in large part on the regulaion of the money supply by the constituted authorities, and on the be- ıavior of people with respect to their confidence in money and their willngness to hold it. This is what is termed a "managed money" system. In ctual practice, monetary systems present various combinations of these two orms; that is, the unit of account may be defined in terms of a certain mount of some precious metal although there may be only a partial con- 'ertibility of the various kinds of money into the monetary metal. Furthernore, the amount of gold or other precious metal which is declared by law o constitute the unit of account can be, and often has been, changed by ubsequent acts of law. In the United States, for instance, the gold "content" ›f the dollar has not always been what it now is. Originally the dollar was dopted by legislative act as the unit of account in the Coinage Act of 792. Its exclusive relation to gold was finally established when the Curency Act of 1900 defined the dollar as equal to 25.8 grains of standard

gold, nine-tenths fine. In 1934 our unit of account was "devalued" when its gold content was reduced to $15\frac{5}{21}$ grains of standard gold or to 59.06 per cent of its previous amount.

CHANGES IN THE VALUE OF MONEY

Not only has the gold content of the dollar changed from time to time; the "commodity value" of the dollar, i.e., its purchasing power over commodities, has also been quite unstable throughout history. Undoubtedly, as we shall see, this instability represents a serious defect in our monetary system. As long as the commodity value of the dollar is steady, it is possible for us to measure changes in the relative values of different goods and services by reference to their money prices. Under these conditions a rise in the price of any given good means that, relative to other goods, its value is greater than before. Let us assume, for example, that the price of shoes, which has been $8, rises to $10, while the prices of all other commodities remain just as they were. In that case the purchase of a pair of shoes involves the sacrifice of a quantity of other things (which could have been bought in place of the shoes) 25 per cent larger than before. The increase in the price of shoes is an exact measure of the change in their relative value.

But when the purchasing power of the dollar changes—that is, when the general level of prices changes—it is impossible to detect a change in the relative value of any given commodity by reference to a change in its money price. This calls for a word of explanation. Due to changes in market conditions, the prices of particular commodities and services change frequently. It is only when all or most prices change in the same direction in the same period of time that a change has occurred in the general price level or in the value of money. Thus, when all or most prices decline, the value of money in relation to commodities and services in general has increased; when all or most prices rise, the value of money in relation to commodities and services in general has diminished. The first case commonly is called deflation; the second, inflation. It will be recalled that in Chapter 8, in connection with our study of national income, we found it necessary to take account of changes in the purchasing power of the dollar.

The production of goods for the market in an economic system such as ours involves many transactions which call for payments to be made at some future date. These are called "deferred payments," and they arise in many different ways. They are called for in various forms of contracts, such as loans, leases, purchases for future delivery, and wage agreements. The individuals or groups concerned are best satisfied when they can feel

reasonably sure that they will receive (or pay) amounts of money in the future which command the same quantity of goods and services as at the time of the contract. There is a need, therefore, for a medium in which to make payments whose value will not change over relatively long periods of time. In this functional sense a money system works well if people can have dealings with one another, which call for future payments, in terms of money having a purchasing power (or value in exchange) that remains reasonably constant over periods of time. Unless people have some confidence that there will be such constancy, they become unwilling to make transactions calling for deferred payments. Only if it shows such constancy can we say that a particular kind of money is a "good" standard of value.

As was suggested above, the actual hand-to-hand use of the precious metals, or the provision, as under the gold-standard system, that any given amount of money could always be "converted into" a specific quantity of gold, received wide acceptance at different times in history. The reason for this was that gold, of all commodities, tended best to satisfy this requirement of a good money (constancy of purchasing power). It became a fairly widespread practice for obligations falling due at some future time to be expressed in terms of a certain amount of gold. But under our current laws affecting money these payments must be contracted in terms of "dollars" which have only an indirect relation to gold. For this reason both debtors and creditors are subject to great uncertainty if the value of the dollar varies rapidly and considerably. Any "managed" money system must have, as one of its aims, the maintenance of such a degree of stability in the value of money (that is, stability of the general level of prices) as will enable deferred payments to be contracted without the high degree of uncertainty which has often existed.

MONEY AS A MEDIUM OF EXCHANGE

The second function of money—that of acting as a medium of exchange—is performed by all those kinds of money which are accepted in a community. The kinds of money which we use in the United States will be described below. It will be seen that they vary all the way from our subsidiary coins, the submultiples of the unit of account, to paper money (government paper money and bank notes), and bank deposits against which checks may be drawn. As long as these things are acceptable in exchange for goods and services they are, in a functional sense, money.

A direct exchange of goods for goods—i.e., barter—presupposes a simple kind of economic system. Indirect exchange—that is, the interposition of

money between goods sold and goods bought—is the necessary corollary of a highly technical and highly specialized system of production. A good money system is one which facilitates these exchanges and does not itself act to hamper the processes of producing goods and services. This is an important consideration because any disturbance of prices and production caused by money makes for insecurity. Economic insecurity is, in very large part, the immediate result of those variations in business conditions and in the activity of the productive system which we call business cycles.

As we saw in Chapter 9, monetary disturbances are connected with business-cycle movements both as cause and as effect. It is on these grounds that we may say that of all the qualities of a "good" monetary system, the quality of not acting to upset economic calculations is of primary importance. This combination of positive and negative functions—of facilitating yet not disturbing the production and the exchange of goods and services—is not at all simple to accomplish. Indeed it appears that a perfect money system, in this sense, has never existed. At the same time we should not jump to the conclusion that monetary disturbances have always acted as the prime cause of economic difficulties.

It is in connection with the function of money as a medium of exchange that we can best appreciate the importance of certain technical features of our money. It is necessary that the money be convenient to use and to handle and that it should be available in all those multiples and submultiples of the unit of account that are necessary to make payments in any amount called for. It must be readily distinguishable and difficult to counterfeit. But these are requirements which are relatively easily satisfied as compared to the requirements of having a stable value and of not acting to cause disturbances of production and exchange.

MONEY AS A STORE OF VALUE

The last function of money which was indicated above—that of a store of value—is one in which monetary systems have failed most conspicuously. For all sorts of reasons people desire to hold part of their claims to wealth in the form of money. These are reasons having to do with convenience and with the advantages sometimes to be gained from having wealth in liquid form. Very often they are traceable to the fact that people fear that the value of other forms of wealth (or claims to wealth) will fall. Thus there is a need for something in which value can be embodied, and which will maintain that value without substantial change, over periods of time and also as between different places. As was indicated above, gold has long

been used as money because (along with other reasons having to do with its technical superiority over other precious metals) of its relative stability of value as compared to other commodities. Nonetheless, it has functioned badly (for reasons perhaps not wholly its own) as the basis of money used by people to "store" value. An inspection of the price history of the United States will show that the value of our money has changed both rapidly and considerably. The fall in the purchasing power of the dollar since 1939 is but the latest of a long series of fluctuations. By this test, it cannot be said that we have as yet established a "good" money system. Yet the American dollar has proved a remarkably stable unit as compared with the German mark after World War I or the Chinese dollar after World War II.

A desirable quality in any store of value is that it should be "liquid," i.e., that it consist of money or of other things readily convertible without loss into money. Thus dollars are our most liquid form of asset. Suppose, for example, that a person possesses wealth in the form of securities, or real estate, or some other nonmonetary property, and that he decides that the risks involved in having his wealth tied up in this or in any other nonmonetary form are too great. He may then decide to sell this asset and to keep the proceeds realized from its sale in the form of a bank balance. The point of such a transaction is simply that it puts one in a position to take immediate advantage of any opportunity for investment that seems attractive. Furthermore, one does not stand the risk of loss involved should the prices of nonmonetary assets decline.

To be sure, the person holding the cash balance does take a real risk—the risk of having prices rise sharply and thus reduce the purchasing power of his money fund. However, when such transfers of nonmonetary assets into cash are widespread it is not likely that prices will tend to rise. On the contrary, they are likely to fall, particularly the prices of the assets that people are anxious to sell. Clearly, if everyone attempted to "store" his wealth in this way, the whole economic system would be demoralized. Thus the search for "liquidity" and attendant financial security, if pursued vigorously and widely enough, can produce significant economic disturbances. Such a fear that nonmonetary assets may fall in price, or become difficult to market, is a feature common to periods of deflation. During the Great Depression of the 1930's the preference—on the part of businessmen and others—for holding money rather than other types of asset became very marked.

But the shoe is sometimes on the other foot. When prices are rising and business is profitable, people may come more and more to prefer illiquid

assets, may become less and less inclined to store their wealth in money form. Characteristic of conditions after both World Wars, this also is a source and sign of instability and an obstacle to business calculation. Just as deflation breeds a growing lack of confidence in the future prices of nonmonetary assets, so inflation leads to distrust of the future purchasing power of the monetary unit itself.

Thus it can be seen that one of the objectives of economic control in general, and monetary control in particular, must be a general stabilization of values. If this were actually realized there would, of course, be little reason for people to seek at some times to store as much of their wealth as possible in the form of money, and to become at other times less and less willing to hold money balances.

TYPES OF MONEY IN THE UNITED STATES

In order to insure that certain kinds of money will be accepted by its people, a government may employ the device of making those kinds of money "legal tender." Legal-tender money is money which, under the compulsion of law, must be accepted at its face value by creditors in settlement of any debt, public or private. The act of legal tender is the offer by a debtor to his creditor of legal-tender money in payment of his debt. The method of forcing the circulation of a particular kind of money by making it legal tender is employed by governments when they issue fiat (or inconvertible paper) money. The best example of this practice in our own history is the case of United States notes, or "greenbacks," issued during the Civil War. At first they were not convertible into standard money but carried simply the government's vague promise to pay. By virtue of being legal-tender money, they were forced into circulation.

Prior to June 1933 only certain kinds of money issued by the United States government were legal-tender money. Gold coins and gold certificates were legal tender for all forms of debt and in unlimited amounts. Silver dollars also had unlimited legal-tender power unless otherwise expressly stipulated by contract (as in the case of a "gold bond" which provided that interest and principal of the bond would be paid in gold). United States notes ("greenbacks") were legal tender for all purposes except the payment of interest on the public debt. Subsidiary silver coins (ten-cent, twenty-five-cent, and fifty-cent pieces) were legal tender for amounts up to ten dollars. Token coins (nickels and cents) were legal tender for amounts up to twenty-five cents. Since June 1933 all forms of money issued by the

ited States Treasury, by the Federal Reserve Banks, and by national ıks have had legal-tender status.

The Gold Standard Act of 1900 instructed the Secretary of the Treas- to keep all kinds of money issued by the United States government at with gold. In practice the only method by which this can be accomhed is through the redemption of all types of money in gold on demand. many years no serious problem concerning the convertibility of any e of money into gold arose. In March 1933, under the pressure brought ut by the banking crisis, and acting under extraordinary authority con-ed on him by Congress, President Roosevelt suspended the redemption currency in gold. At the same time he ordered that all monetary gold l by any corporation or person in this country be surrendered to the eral Reserve Banks. Since that time, therefore, the money of this coun- has not been convertible into gold for internal use, although gold may be obtained under specified conditions from the Federal Reserve Banks means of making payments in foreign countries. This fact being kept in d, the following classification of currency, based upon the pre-1933 umption of convertibility into gold, will serve to indicate the kinds of ıey which do, or did, circulate in the United States.[1] The status of ıey, with regard to what gives it value, since 1933 will be described later he chapter.

Money issued by the United States. GOLD COINS, now out of circulation no longer coined, were minted in $5, $10, and $20 pieces. Each dollar gold coin consisted (prior to 1933 when they still were being coined) 5.8 grains of gold, nine-tenths fine.

GOLD CERTIFICATES, now out of circulation, are held exclusively by Fed- Reserve Banks in lieu of their former gold reserves. Each gold certifi- represents a definite quantity of gold coin which is held in the United :s Treasury for its redemption. First issued during the Civil War, gold ficates are issued in denominations ranging from $10 to $10,000.

SILVER DOLLARS are a survival from the days of bimetallism in the United :s. Have never been directly redeemable in gold, but were made indi- y so redeemable by the Gold Standard Act of 1900. One silver dollar ains 412.5 grains of silver, nine-tenths fine.

SILVER CERTIFICATES are similar to gold certificates in that they are rep- ıtative money. They represent silver dollars held in the United States

[1] One kind of currency, Treasury Notes of 1890, is outstanding in such small quan- slightly more than one million dollars) that it is not included in the classification ıted here.

Treasury for their redemption. These certificates are issued in denominations of $1 to $1,000. After Federal Reserve notes (see below), silver certificates are today the most important single element in the currency, about $2,000,000,000 worth being in circulation on June 30, 1947.

UNITED STATES NOTES ("greenbacks") were originally fiat (inconvertible paper) money issued by the federal government to aid in the financing of the Civil War, and were later made convertible into gold. The amount of these notes in circulation ($320,000,000 on June 30, 1947) has not varied greatly for many years. They are issued in denominations of $1 to $10.

SUBSIDIARY SILVER AND TOKEN COINS: Half-dollars, quarters, and dimes are coined from silver bought by the Treasury for this purpose; are less than proportional to silver dollars in weight. Nickels and cents are coined from baser metals bought by the Treasury for that purpose.

Money issued by banks. FEDERAL RESERVE NOTES are issued by the Federal Reserve Banks and are liabilities of these banks, although they are guaranteed by—and hence finally are liabilities of—the federal government. Were redeemable in gold prior to 1933. Were then secured by a reserve of 100 per cent in gold and commercial paper, of which total reserve gold, under ordinary circumstances, constituted at least 40 per cent. The Federal Reserve Act authorized the gold backing of these notes to be reduced in emergencies. Are issued in denominations ranging from $5 to $10,000. Federal Reserve notes constitute by far the largest single element in the currency, there being almost $24,000,000,000 worth of them in circulation on June 30, 1947, compared with a total of $3,000,000,000 for all other types of notes, and slightly more than $1,000,000,000 in coin.

FEDERAL RESERVE BANK NOTES were authorized by the Federal Reserve Act as a means of retiring outstanding national bank notes (see below). The original act provided that they, like national bank notes, be secured by United States bonds which carry the "circulation privilege." The replacement of national bank notes proved unpopular with the national banks, and the Federal Reserve bank notes which had been issued were almost completely retired.

NATIONAL BANK NOTES are issued by national banks, and are secured by United States bonds owned by the banks. The bonds which secure these notes have been endowed with the "circulation privilege" (i.e., specifically authorized for use as security for national bank notes) by act of Congress. Only a limited amount of these bonds are now outstanding, and this sets a limit to the amount of national bank notes which can be issued. Are issued in denominations ranging from $1 to $1,000, with $106,000,000 outstanding on June 30, 1947.

CREDIT MONEY

The end of money is in its command over goods and services; the beginning of most of it is in credit. Let us consider one or two specific cases. In the list of types of money given above, United States notes, or greenbacks, are described. These notes were issued during the Civil War when the credit standing of the United States government was low. People would not voluntarily risk their funds by lending them to the government (and sufficient taxes could not be collected). But the government had to manage somehow to meet its expenses. Otherwise it could not prosecute the war—or perhaps even continue in existence. Hence it adopted a method of forcing its credit upon the people by issuing large quantities of its own promises to pay, in the form of greenbacks, making them legal-tender money and compelling their acceptance by persons or business concerns in payment of debt.

A more common type of credit money today consists of Federal Reserve notes. Each Federal Reserve note is a promise of the Federal Reserve Bank which issued it to pay to the bearer a stated number of dollars on demand. The issuance of Federal Reserve notes will be described in detail in Chapter 20. Silver certificates, of which a large number are in circulation, entitle their holder to a specific quantity of silver which is held by the Treasury for their redemption. But the amount of silver held for the redemption of each dollar (412.5 grains, nine-tenths fine) sells for considerably less than a dollar on the market today. Thus even silver dollars and their representative, silver certificates, are credit money. Since gold coins and gold certificates are not permitted to circulate, all forms of currency listed above represent, at the present time, the credit either of the federal government or of the banks.

Hence the value of money in this country since the abandonment of the unqualified gold standard is due, not to its ready convertibility into a given amount of gold or other precious metal, but rather to the fact that people will accept it readily in exchange for goods and services. This illustrates an important characteristic of any money: its value depends upon the willingness of people to accept it in exchange for other things, and their willingness depends in turn upon their expectation that *they* will be able to buy with it fairly certain quantities of the things that *they* want. The convertibility of money into a specific quantity of gold is thus important only if it causes money to be more readily acceptable, either immediately or at a future time, in exchange for goods and services.

THE FORMS AND USES OF CREDIT

Bank liabilities and bank assets. An even more important form of credit money consists of bank deposits. A bank deposit is a liability owed by a bank to its customers. If the deposit is a checking account, it is called a demand deposit (being payable on demand). In that case the customer can draw checks on the bank, and the transfer of a deposit by check represents a convenient way of making payments. A time deposit also is a very liquid asset, although here the bank can insist on receiving notice (up to 30 days) before the customer uses his funds. That demand deposits of the commercial banks are quantitatively the most important form of money is evidenced by the commonly accepted estimate that 90 per cent of the total volume of payments made in the United States is made with checks.

The assets of a bank are the obverse of its liabilities; they represent credit in a different sense. Some of these assets necessarily consist of cash. But the bank will also have assets in the form of debts owed to it; it will have lent money to its customers for business and other purposes, and to governmental units and corporations by purchasing their bonds or other obligations.

Thus banking involves borrowing from one set of people and lending to another set of people (although, as will be shown in the next chapter, banks do not simply lend the money that they borrow). Whenever borrowing or lending occurs, we may speak of a "credit transaction."

The pervasiveness of credit. A great many transactions involve payment in money at some later time. Credit transactions take place over a wide range of our economic affairs—all the way from the purchase of groceries which are not paid for until the end of the month, to the issuance of bonds by a business concern or a governmental body. Most dealings involve credit in some way or other. Thus the wage earner who does not get paid for his work until the end of the week is, in effect, extending credit to his employer. All such transactions imply on the part of the creditor a confidence in the willingness and the ability of the debtor to make payment when the time stipulated for payment arrives. Credit is not, therefore, merely a substitute for money. In so far as credit is used for the purchase of commodities or services, it *is* money, and it has the same effect on the demand for, and the supply of, goods and services as that exercised by the several types of money listed earlier in this chapter.

Types of credit. Credit performs functions, and to understand it requires an understanding of its functions. What the British economist, Mr.

Hawtrey, has said of money may equally well be said of credit; it "is one of those concepts which, like a teaspoon or an umbrella, but unlike an earthquake or a buttercup, are definable primarily by the use or purpose which they serve." The uses and purposes served by credit can best be approached by an analysis of the principal kinds of credit. Credit is:

As to duration of loan:
(1) short-term; (2) long-term; (3) intermediate.
As to purpose served by loan:
(1) commercial; (2) investment; (3) consumption.
As to type of borrower:
(1) public (a government); (2) private (a person or corporation).

CLASSIFICATIONS OF CREDIT

In classifying credit according to duration, there is no clear demarcation between short-term and intermediate, and between intermediate and long-term. It is a convention among bankers to regard short-term credit as that which runs from a few days to about three months, intermediate credit as that which runs for from about six months to about two years, and long-term credit as that which runs for about five years or longer. There are shadowy areas between these types in which it is difficult to say whether a particular extension of credit belongs to one type or another. Usually, however, the purpose for which the loan is used indicates its duration. Thus credit which is used to build a public highway, or to buy a farm, or to install machinery in a factory, ordinarily is long-term credit. A highway or a farm or an installed machine has very little quality of "liquidity"; such a thing is valuable basically because of its long-time productive usefulness. Presumably it *will* be used productively for a long time.

Short-term credit, in its turn, is typified by the credit which a merchant may use when he buys a bill of goods. If he is a successful merchant, presumably he will be able—say in ninety days—to realize enough cash from the sale of the stock which he has on hand to meet his obligation. Unless it is presumable that he will liquidate his stock at such a rate, it follows that he will be neither a successful merchant nor able to get credit—which amounts to saying the same thing in two ways. Thus the greater the liquidity of the thing which is bought with credit, the shorter, generally speaking, the duration of the credit will be.

Credit may also be classified by the use to which it is put. Commercial credit is used for the purchase of something which is expected then to be sold. The example given above of a merchant who uses his credit

to buy a bill of goods is a case of commercial credit. Such credit transactions are "self-liquidating" to a greater or less degree, in the sense that the things which are bought will tend to be sold and thus to furnish the cash necessary for the final extinction of the credit. Investment credit is exemplified by the use of credit to build a factory. In this case the thing which is bought is not "self-liquidating." It is expected, however, that it will during the period of its productive operation yield an income sufficient to pay interest on the indebtedness and, finally, to pay the principal of the indebtedness. It is only because there is a prospect of this much (or more) return from the investment that the borrower seeks to secure the credit or that the lender takes the risk of extending it. Consumption credit is granted to enable a consumer to pay for an automobile or a washing machine "out of income." Generally it is repayable in definite installments over a fairly brief period of time.

The final classification—as to type of borrower—is that between public borrowers and private borrowers. The public credit is used whenever the government of the nation, a state, or a local political unit borrows. The security for such a loan consists of all the resources (including the taxing power) of the governmental body concerned. In the case of funds which are used for such purposes as building roads or waging war, the governmental body ordinarily issues and sells long-term bonds. To protect its credit it is necessary, in such cases, that the government secure enough ordinary revenues (e.g., from taxes or assessments) to pay interest on the debt and to build up a sinking fund with which the debt ultimately will be retired. Governmental bodies also are users of short-term credit when they secure loans to meet their ordinary operating expenses, and pay back the loans from their first available ordinary revenues. Through short-term loans the government is able to meet expenses as they arise instead of having to wait until the necessary revenues actually have been received. The credit extended to private borrowers has been sufficiently described in earlier parts of this chapter.

From what has been said it should be clear that the classes of credit which are described here overlap each other at many points. Thus, either public or private credit may be short-term, intermediate, or long-term, and may also be used for commercial or for investment purposes (although relatively little public credit is used for commercial purposes). Finally, concerning all of these types of credit, it is apparent that the prospectiveness of the means of making final payment is of basic importance. Sometimes the reputation of the borrower as a person of integrity and ability may

ɔne be sufficient assurance to the creditor that a debt will be paid when ıe. To the borrower such a reputation is an important business asset. Ornarily, however, a lender will desire tangible evidence that a debt can and ill be paid when it is due. In the case of self-liquidating commercial loans, e proceeds from the sale of goods furnishes assurance. In the case of instment credit, a mortgage on productive property may secure the credɪr against loss.

The remainder of this chapter will discuss bank credit because it is the rm of credit most intimately connected with the supply of money.

NK CREDIT

The ability of bankers to extend credit rests on a very simple primary ıdition. When a borrower secures credit from a bank, the bank does t simply hand him money in return for his note; it gives him instead a ɔosit in the bank. Thus banks, through their extensions of credit, always ʳe liabilities in the form of deposits in excess of the amount of cash which y have on hand to meet the demands of their depositors. If all deposis of a bank were to try to withdraw their balances at the same time, it ʳery unlikely that the bank would be able to pay all of them in cash, ɪn if the bank's total assets were considerably in excess of its deposit liaties. The banking crisis of 1933, during which a great many depositors a large number of different banks all demanded payment at the same e, illustrates the weakness of the banking structure as a whole in the ɜ of a widespread lack of confidence.

With a well-organized system of banking, however, there is very little lihood that all of the depositors of a bank will demand payment at the e time. Banks, like insurance companies, base their operations on the ıciple of large numbers, or probability. Under ordinary conditions kers have almost complete certainty that the amount of cash withdrawals period of time will not be substantially greater than the amount of cash ɔsits. There are a few definite periods in which cash deposits and cash ıdrawals do not normally balance each other. Thus, especially in cities, y Friday cash withdrawals tend to exceed cash deposits; every Monthe opposite tends to be true. Just before Christmas more cash is withʳn than deposited; just after Christmas more is deposited than withʳn. In agricultural sections large withdrawals of cash occur at cropıng periods. All of these special conditions are well known, however, bankers can provide for them by planning in advance.

THE COMMERCIAL BANK AS DEBTOR AND CREDITOR

A peculiarity of the commercial bank as a financial institution is that most of its liabilities are in the form of customers' accounts against which checks may be drawn. This characteristic distinguishes commercial banks from savings banks, investment banks, and other banking agencies whose customers are not ordinarily in a position to transfer their accounts by check. Our special concern here will be with *commercial* banks due to this peculiarity, i.e., that a commercial bank's customers can write checks against their deposits, and that such deposits consequently fulfill the same functions as do other kinds of money. Checking accounts are in fact by far the most important kind of money, for the public possesses about three times as much money in the form of demand deposits as it does in the form of currency.

To see how commercial banks operate we can best construct a highly simplified example. Let us decide to open a new bank with a subscribed capital of $100,000, which sum we use for the purchase of a banking house and equipment. For convenience of illustration we will suppose that the community to be served by our bank did not previously have banking facilities. As soon as our bank opens for business, we will suppose that customers deposit $200,000 in cash—receiving, of course, checking accounts in return. At this point our bank's balance sheet will look like this:

ASSETS	
Banking house and equipment	$100,000
Cash	200,000
Total	**$300,000**
LIABILITIES	
Capital owed to stockholders	$100,000
Customers' deposits	200,000
Total	**$300,000**

Such a bank might be called a "checkroom" bank, for it has in its vaults fully as much cash as it owes to its customers. Like the ordinary checkroom, the tickets which it has issued correspond exactly to the property on hand, and their simultaneous presentation could cause no embarrassment. Some of the early European banks, such as the Bank of Amsterdam, were conducted on this principle, i.e., the maintenance of a cash reserve equal to 100 per cent of the deposit liabilities. However, the absence of earning assets makes a checkroom bank relatively unprofitable, and no modern bank would maintain so high a degree of liquidity.

Quite early in the history of banking, in fact, it became obvious that epositors would not ordinarily demand cash all at the same time. It was ain that the demand for cash could be predicted in advance, and that an nount of cash considerably less than 100 per cent of deposits was all that ed be kept in the vaults. Some portion of the cash originally deposited ight therefore be lent out or used to purchase bonds or other securities referably short-term). In accordance with this principle, let us have our nk lend out half its cash at short term to customers. The balance sheet en might look like this:

ASSETS	
Banking house and equipment	$100,000
Cash	100,000
Loans to customers	100,000
Total	**$300,000**
LIABILITIES	
Capital owed to stockholders	$100,000
Customers' deposits	200,000
Total	**$300,000**

But in fact the above is very unlikely to be the result of the lending eration, and especially unlikely if there is only one bank in the commu-y. For the customers who borrowed would have no particular desire to ain *cash*. In fact, they would probably prefer the convenience of a cking account, and—if we insisted on lending them bills and coin—would nediately redeposit most of such cash. Nowadays the loan of cash and subsequent deposit are normally telescoped into a single transaction ereby the borrower receives the right to draw a check, i.e., he receives eshly created deposit, in return for his note or other evidence of indebt-ess. The balance sheet of our bank, after it has lent $100,000, is there-more likely to look like this:

ASSETS	
Banking house and equipment	$100,000
Cash	200,000
Loans to customers	100,000
Total	**$400,000**
LIABILITIES	
Capital owed to stockholders	$100,000
Customers' deposits	300,000
Total	**$400,000**

As a result of its lending, the bank's "cash ratio" (ratio of cash to deposits) has fallen from 100 per cent to 66⅔ per cent. Experience may quite possibly show that not as much as $200,000 is needed in vault to meet the day-to-day demands for cash by customers who possess $300,000 of deposits. Or, to turn the statement around, $200,000 cash may be found sufficient to support more than $300,000 of deposits. Assuming this to be the case, let us suppose that the management of our bank has satisfied the borrowing proclivities of its customers for the time being. In the search for additional earning assets the next step might be to acquire the short-term obligations of the federal government or of other governmental units, or possibly of some large corporation. Let us suppose our bank now purchases $100,000 short-term securities in the open market. It pays for the securities by placing a freshly created deposit (or deposits) of $100,000 to the credit of the sellers. The balance sheet will then read as follows:

ASSETS	
Banking house and equipment	$100,000
Cash	200,000
Loans to customers	100,000
Marketable securities	100,000
Total	**$500,000**
LIABILITIES	
Capital owed to stockholders	$100,000
Customers' deposits	400,000
Total	**$500,000**

The $200,000 cash in vault now supports $400,000 of deposits: the cash ratio has fallen to 50 per cent. The bank now has $200,000 invested in earning assets which may be supposed to provide it with a comfortable income out of which to meet expenses.

How much further can our bank safely go in acquiring earning assets—in "creating credit"? The answer is complex and has varied from one period of banking history to another. For the bank we have envisaged (a single bank in an isolated community) the answer depends upon the confidence of our customers and the degree to which they need cash for making small payments of a kind not commonly made by check. In the above example we have assumed that the creation of additional deposits did not result in the withdrawal of any cash from the vaults of the bank into circulation among members of the public. But in fact, even if (as we may assume) the decline in the bank's cash ratio causes no uneasiness in the minds of depositors, the expansion of deposits will lead to additional spend

ing, and some of the additional spending will be made by cash and not by check. Some cash will therefore be withdrawn into circulation as the lending progresses. The cash ratio will tend to shrink at both ends when such a bank lends more: as the denominator (deposits) increases, the numerator (cash in vault) will diminish. If our bank did the amount of lending indicated above, its cash ratio would probably settle at a level somewhat below 50 per cent.

RELATIONS BETWEEN BANKS

The above illustration explains the relations of assets and liabilities of a single bank in an isolated community. Since banks actually do not operate in such isolation, it is necessary to carry the analysis a step further. Let us suppose that there are several banks in the same community, and that people in this community are doing business with people in other communities where other banks are situated. It is immediately apparent that checks drawn against a particular bank will be deposited in other banks. At the same time, in the case of each bank, such withdrawals will be offset to a greater or less extent by the deposit of checks drawn against other banks.

The balancing of withdrawals with deposits is facilitated by the system of "clearing" which is used by banks in their dealings with each other. Most of the checks which are drawn against a particular bank probably will be cashed at, or deposited in, banks other than the one against which they are drawn. In the process of banking operation, however, it normally happens that the claims held by banks against each other tend to cancel. Thus Bank A has claims in the form of checks against Bank B, but Bank B also has claims of a similar sort against Bank A. The banks simply offset these claims which they hold against each other, and settle balances which are quite small by comparison to the total amount of claims involved. This process of "clearing," especially between banks situated in different localities, is carried on through the Federal Reserve System.

Even with a system of clearing, however, there are certain restrictions placed on each individual bank by the fact that some of the checks drawn against it will be deposited in other banks. Let us suppose that there is a self-contained community which has ten banks, and that the banking business of the community is equally divided among the ten banks. Let us suppose, also, that the amount of credit extended by each of nine of these banks remains constant, but that the tenth bank is increasing the amount of its loans. As its loans increase, its deposits also increase, the reason being that the amounts of the new and additional loans are credited to the accounts

of the borrowers. But the increase in the amount of this bank's deposits will result, as a rule, in an increase in the volume of checks drawn against the bank. According to our assumption, about 90 per cent of the amount of these additional checks will be deposited in the other nine banks of the community. Since nothing has occurred to cause a proportional increase in the volume of checks drawn against these other banks, the bank extending the additional credit will suffer an increase of withdrawals without a corresponding increase of deposits. It should be clear, however, that if all of the banks were increasing their loans at about the same rate, no such result would follow. Thus, the amount of lending a particular bank can do is influenced by the aggregate amount of lending done by all the banks together.

Today control over the lending policies of commercial banks as a group is exercised by the Board of Governors of the Federal Reserve System, to be described below. All members of the system (and nearly all commercial banks are members) are required to keep stated amounts of reserve (i.e., claims to cash, with which to meet the demands for cash of their depositors) on deposit with the Federal Reserve Banks instead of in their own vaults.

LOANS BY COMMERCIAL BANKS

To an increasing extent in recent years bank assets have come to consist of marketable securities, and especially of short-term government bonds. The significance of this development will be discussed in Chapter 21. Historically, however, the traditional function of bank lending has been to accommodate not the Federal Treasury but the commercial borrower.

The loans extended by commercial banks are of several kinds. A bank may make loans against the following kinds of credit instrument: (1) "single-name" promissory notes of persons or corporations; (2) "two-name" paper—i.e., notes which are endorsed and drafts which have been "accepted" (acceptances will be explained below); (3) promissory notes secured by stocks or bonds which are held by the bank as collateral ("collateral" security means valuable property—usually stocks or bonds—which is specifically pledged as security for a loan; i.e., if the borrower does not pay, the "collateral" will be sold by the bank to satisfy the debt); (4) drafts secured by bills of lading (since a bill of lading is a receipt for goods which have been shipped, and since the consignee cannot get the goods without the bill of lading, this provides definite security to the bank that the loan will be paid); (5) promissory notes or drafts secured by warehouse re-

ipts (a warehouse receipt provides security for a loan in the same manner a bill of lading); (6) real-estate mortgages, stocks, bonds, etc. (which tually are investments rather than commercial loans).

Commercial credit. The credit extended by commercial banks tradi-onally arises out of commercial transactions (although, as will be explained low, this tradition has come to be more honored in the breach than in e observance). In such cases it is said that the banks "finance" the transac-ons. In its simplest form such financing is illustrated by a farmer who rrows on his personal note from the local bank in order to meet the penses of harvesting and threshing his wheat crop. He then sells the eat and repays the bank from the proceeds of the sale. The commercial nsaction, in this case, was completed when the farmer sold his wheat. e bank made it possible for him to complete the transaction by lending n the funds. For our present purposes, however, it will be helpful to mine a case in which commercial bank credit arises out of a somewhat re involved commercial transaction. In this case a bank "finances" a nsaction between a buyer and a seller who are widely separated.

The trade acceptance. Let us suppose that a wholesale merchant in St. uis buys a bill of goods from a manufacturer in New York on ninety 's' credit. The New York manufacturer does not have sufficient working ital to "carry" this credit transaction himself for ninety days. He knows, vever, that the Corn Exchange Bank (which we will assume to be the k with which the manufacturer regularly does business) will "discount" ill of exchange drawn by him against the buyer of the goods. He there-e ships the merchandise to the wholesaler in St. Louis. We will assume the value of the goods (on the terms given when the purchaser receives ety days' credit instead of paying cash) is $10,000. When the manufac-r ships the goods, he draws a bill of exchange calling upon the St. Louis olesaler, ninety days from date, to pay to the Corn Exchange Bank in v York $10,000.

Once the drawee (i.e., the buyer of the goods) in St. Louis has epted" liability by signing his name across the face of the bill, the ver in New York can "discount" it with the Corn Exchange Bank, at) 4 per cent per annum. That is, the bank credits the account of the r of the goods with the amount of $10,000 less 4 per cent per annum for ty days, a net credit of $9,900. Ninety days hence the drawee in St. s will be required to pay the face value of the bill ($10,000) to the n Exchange Bank. In this manner the bill is, from the viewpoint of the which discounts it, "self-liquidating." A bill drawn upon a commercial and accepted by it, is known as a "trade acceptance."

The bank acceptance. A bill can be discounted only if the drawee (or some subsequent endorser) is sufficiently known. In case the buyer of the goods, in St. Louis, is not well enough known in New York for bills drawn upon him to find a ready market, he may persuade his St. Louis bank to act as drawee in his stead. In that case he will ask the New York manufacturer to draw a bill on the St. Louis bank; the bank will accept the bill, and will look to its customer—the St. Louis merchant—to furnish the funds when the bill falls due. The St. Louis bank of course charges a commission, but the bill is now a "bank acceptance," and can probably be sold, or discounted, at a somewhat lower rate of interest than could a trade acceptance. It should be noted that the liability assumed by the accepting bank is a purely contingent one; it expects its customer, in whose interest the acceptance was made, to provide the funds for paying it when it is due. It also should be observed that the actual advance of funds is not made by the accepting bank, but by the bank, corporation, or person who *buys* (i.e., discounts) the accepted bill. If the bill (drawn on the St. Louis bank) is discounted, as in the previous case, by the Corn Exchange Bank in New York, the funds are of course furnished by the latter institution.

Current status of the bill of exchange. For arranging the movement of funds from one part of the United States to another, and simultaneously creating a negotiable instrument, the bill of exchange was a favorite device during the eighteenth and much of the nineteenth century. In foreign trade, where an exporter in another country would draw a bill of exchange on some American importer (trade acceptance) or the latter's bank (bank acceptance) for discount in New York, the bill of exchange still plays a fairly important role. Indeed, as we shall see, the founders of the Federal Reserve System considered commercial paper, i.e., bills of exchange, the ideal form of credit and urged expanded use of this type of instrument. Yet banks now make commercial loans almost entirely on the signature of the borrower alone (though collateral may be needed), and payments are made in distant cities by bank check rather than by bill. Even in foreign trade, loans are now made directly to participants in transactions, and settlements are commonly made by telegraphic transfer. The importance of the bill of exchange, once the principal instrument of commerce, now lies chiefly in the impress it has left on banking institutions and the laws under which they operate.

CHAPTER TWENTY

Commercial banks and the Federal Reserve System

THE ACCOUNTS OF A COMMERCIAL BANK

The substance of a bank consists of monetary claims which others have against it and monetary claims which it has against others. A bank assumes obligations to pay money to people or firms on demand (these obligations are its demand deposits). At any moment that it fails to meet these obligations, it becomes legally insolvent. Thus it is the primary responsibility of a bank to be prepared at all times to meet the demands which may be made upon it. To do this it has a sum of cash on hand and also holds obligations of people and firms to pay money to it. These obligations of others to pay money to it constitute the largest part of a bank's "assets." In addition to cash and receivables, a bank also may have assets in the form of a bank building or buildings and banking furniture and fixtures, which are, of course, of some value and so constitute assets. It was explained in the preceding chapter how cash withdrawals from a bank in a period of time tend to be approximately balanced by cash deposits. At this point it is desired to analyze the particular forms of the liabilities and assets of a bank.

The balance sheet of the Manufacturers Trust Company, which appears on the following page, will repay careful study. It is a fairly typical statement of the condition of a large city bank in the year 1947. The first asset listed, "cash and due from banks," includes currency in the vaults, deposits with other banks, together with amounts deposited with the Federal Reserve Bank of New York (which amounts alone may be counted as required reserves against deposit liabilities). More than half the bank's earning assets consist of United States government securities, and most of the remainder of loans, bills, and acceptances. Among minor assets may be noted an investment in the stock of the Federal Reserve Bank of New York. This

stock ownership results from membership by the Manufacturers Trust Company in the Federal Reserve System. Every member bank is required to subscribe for stock in the Reserve Bank of its district to an amount equal to 6 per cent of its capital and surplus, half of which must be paid up.

Since the Manufacturers Trust Company is a bank and its customers are depositors, by far the largest liability consists of deposits. Two small

MANUFACTURERS TRUST COMPANY

NEW YORK

STATEMENT OF CONDITION

(at close of business December 31, 1947)

ASSETS		LIABILITIES	
Cash and due from banks	$ 716,527,697.93	Capital	$ 41,250,000.00
U.S. government securities	1,173,607,276.55	Surplus	60,000,000.00
U.S. government insured F.H.A. mortgages	3,226,973.93	Undivided profits	22,565,100.78
State and municipal bonds	27,296,037.43		$ 123,815,100.78
Stock of Federal Reserve Bank	3,037,500.00	Reserve for contingencies	10,110,272.44
Other securities	22,035,108.68	Reserves for taxes, unearned discount, interest, etc.	5,990,230.70
Loans, bills purchased and bankers' acceptances	484,035,603.66	Dividend payoble Jan. 2nd	1,237,500.00
Mortgages	14,063,769.90	Outstonding acceptances	7,068,246.35
Banking houses	10,243,576.73	Liabilily as endorser on acceplances and foreign bills	158,336.00
Other real eslale equilies	233,980.73		
Customers' liability for acceplances	6,486,993.42	Deposits	2,320,056,666.84
Accrued interesl and other resources	7,641,834.15		
Total	**$2,468,436,353.11**	**Total**	**$2,468,436,353.11**

items show contingent liabilities (i.e., liabilities that must be met only if some other obligated party does not meet them) for acceptances of the kind described at the end of Chapter 19. Capital, surplus, and undivided profits are all owed to stockholders; indeed any surplus assets over and above liabilities to customers or other outsiders belongs automatically to stockholders. At first sight it seems odd that "reserves" should be carried among the liabilities rather than the assets; we must think, however, of a "reserve for taxes" as meaning "estimated future liability for taxes." As for the "contingencies," if none arises, the "reserve" for this purpose will revert to stockholders. (The *cash reserve* discussed in the preceding chapter of course [illegible] from "cash and due from banks" at the head of the assets

At the beginning of the discussion of this balance sheet it was stated at it is a fairly typical statement of the condition of a large city bank at e present time. Certain conditions shown by the balance sheet are, there-re, deserving of special notice.

Of the total assets of this bank, more than one-half consist of invest-nts in public and private bonds, stocks, mortgages, and real estate. This ans, of course, that a large proportion of the bank's assets is made up paper which is not "self-liquidating" in any short period of time. The ns, bills, and acceptances shown in the statement will of course be paid cash on a specified date. Other assets may have to be sold, if it is desired convert them into cash. However, as we shall see, banking liquidity has n much increased through the possibility of pledging assets against loans m the Reserve Banks.

We already have shown how liquidity in the assets of a bank affects solvency of the bank and the security of its depositors. In general, uidity depends on the facility with which a bank can meet its depositors' ands for cash by converting its assets into currency. The greater the spect that depositors will desire to withdraw their accounts from the k, the greater is the necessity for careful planning on the part of the k in order that its assets may be in proper shape to assure liquidity. The e diversified the deposits of a bank are—that is, the more widely dis-uted they are among depositors who are in different sections, as in the of branch banking—the less is the probability of a large number of positors withdrawing their funds at the same time. Also, the more diver-d the loans made by a bank are, the better the chance becomes that arge proportion of the assets of the bank will lose their liquidity and me "frozen." From the point of view of the bank, the kinds of diver-ution indicated here represent a distribution of risks which reduces each of risk and assures more stable operation.

In the event a commercial bank becomes short of cash to meet the nds of its depositors, it must evidently require its debtors to pay their when due, instead of renewing them, and dispose of securities it owns, der to replenish its reserve of cash. Throughout the nineteenth cen-this was the normal procedure on the part of banks. Two major in-eniences were, however, found to result. First, the desire of the public

for additional cash was often of a temporary, even a predictable nature; for instance, the marketing of crops would drain cash from the cities to the agricultural regions each fall, and the cash would return as the farmers paid their debts and bought supplies. The liquidation of its earning assets to meet a temporary stringency often seemed to bankers to be an overdrastic remedy. Second, the desire of the public for cash was likely, especially at times of commercial crisis, to reduce the liquidity of all or of a large number of banks simultaneously. Precisely at such moments the banks would find it least easy to demand payment of their loans; nor could a ready market always be found for the securities they might wish to sell. By the end of the nineteenth century it was apparent that at such times the efforts of the banks to maintain their liquidity, in the face of increased demands for cash by the public, was an important factor intensifying the severity of commercial crises. To provide the nation's banks with a source from which they themselves could borrow in case of need, the Federal Reserve System was established in 1914. Thus the twelve regional Reserve Banks now perform for the 20,000 odd commercial banks much the same functions as the latter do for the public at large.

THE BACKGROUND OF AMERICAN CENTRAL BANKING

Until 1913, when the Federal Reserve Act was passed, each commercial bank in the United States operated independently of every other bank. It was true that each bank had arrangements with other banks involving such matters as clearing and collection of credit items, but there was no central banking organization which would serve to systematize relations among the banks of the country. Since the Civil War, there had existed two general types of commercial banks: those which operated under charters issued by the United States (national banks) and those which operated under charters issued by the banking authorities of the states (state banks). The national banks had been subject to regulation and inspection by officials of the federal government. The operation of state banks had been controlled by legislation passed by the various state legislative bodies and had been subject to inspection by the banking authorities of the several states. The laws affecting banking in some states had been less stringent than the laws bearing upon the national banks. For this reason there had been an incentive for banks in those states to operate under state charters rather than under national charters. This, in addition to the fact that there had not existed any central banking organization prior to the passage of the Federal Reserve Act, promoted "independent" and disorganized banking. There had been

further complicating factor in that the commercial banks of the country numbering approximately twenty-eight thousand in 1913, but considerably ess at the present time) had never been subject to uniform regulations.

The federal government and the several states had required by law hat the banks operating under charters issued by them maintain certain o-called legal reserves. These reserves represented the amount of "lawful" ioney which, in the opinion of the legislative bodies passing the various inking acts, would serve as the minimum requirement for solvency on the irt of the banks. Any bank whose reserve fell below the level prescribed / the law under which it operated could neither extend further loans nor y any dividends until the level was restored. The reserve provisions for mmercial banks which were adopted by the various states were patterned irly closely after those prescribed by the federal government for national nks, although there had been some differences among the states with re- ect to specific legal reserve requirements. Prior to the passage of the Fed- l Reserve Act, the reserves which were required of national banks were:

1. For banks in "central reserve cities" (New York, Chicago, and St. uis, which were the principal financial centers at that time) a cash reserve 25 per cent of the total amount of deposits.

2. For banks in "reserve cities" (forty-eight specified large cities which re relatively important business centers) a cash reserve of 25 per cent of total amount of deposits. A bank in a reserve city might at its own dis- tion keep as much as one-half of its legal reserves in the form of deposits anks in central reserve cities.

3. For "country banks" (all banks in places not specified as either cen- reserve or reserve cities) a cash reserve of 15 per cent of the total unt of deposits. A bank designated as a "country bank" was permitted, s own discretion, to keep as much as three-fifths of its reserves in the n of a deposit in a bank or banks in a reserve city, a central reserve city, oth.

These reserve requirements led to frequent, and sometimes difficult, plications. Perhaps the most serious complication was that the reserves ountry banks and reserve city banks would tend to consist very largely leposits in banks in central reserve cities. This was the notorious amiding" of bank reserves. Thus a country bank was permitted to have uch as three-fifths of its reserves on deposit in a bank in a reserve city. bank in the reserve city in turn might have as much as one-half of *its* ves on deposit in a bank in a central reserve city. New York banks, in cular, were anxious to get these deposits from other banks, and would some inducement to banks in reserve cities and to country banks to

keep a part of their reserves in the form of deposits with them. The access of the New York banks to the call-loan market made it particularly profitable for them to have fairly stable deposits which they could use as a basis for call loans made to stock-market operators. (The call-loan market is described in Chapter 23.) This situation caused the liquidity of the bank reserves of the country to be contingent on the state of the securities market. It happened sometimes (the panic of 1907 is a striking example) that sudden withdrawals of funds from the call-loan market would precipitate a collapse of security values, or that a sudden drop of security values would make it extremely difficult for country banks and banks in reserve cities to withdraw the deposits which they had in New York banks. The effects of such withdrawals would be to weaken the stock market further and to bring on a financial crisis. Such a crisis was frequently intensified by a widespread fear among people, which would lead to a panic marked by runs on banks throughout the country. When runs are made on a great many banks at the same time, the entire banking system is at once threatened with insolvency, since all banks cannot liquidate their assets simultaneously.

THE FEDERAL RESERVE ACT

President Wilson's platform in the election of 1912 had contained a promise, as a part of the "New Freedom," to "take the money power of the nation away from Wall Street." The Federal Reserve Act was passed in an avowed attempt to give effect to this promise. It provided that there be created between eight and twelve regional reserve banks (instead of one central bank as in Britain and many other countries) and that these reserve banks be controlled by a Federal Reserve Board in Washington. The members of this board were the Secretary of the Treasury, the Comptroller of the Currency, and six other members appointed by the President.[1] The Organization Committee, which gave effect to the act, divided the United States into twelve Federal Reserve Districts, each having a Federal Reserve Bank. These twelve Federal Reserve Banks are situated in Boston, New York, Philadelphia, Richmond, Cleveland, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco.

[1] By the Banking Act of 1935, the name of this board was changed to the Board of Governors of the Federal Reserve System, and the membership of the board was revised. The Board of Governors now consists of seven members appointed by the President for terms of fourteen years. Not more than one member can be appointed from a single Federal Reserve District. The removal of the ex officio members (the Secretary of the Treasury and the Comptroller of the Currency) was designed to make the status of the

The Federal Reserve Act requires that each national bank become a ıember of the Federal Reserve Bank of its district. Each member bank is :quired to subscribe for stock in the Federal Reserve Bank of its district) the amount of 6 per cent of the bank's capital and surplus. State banks 'e permitted to become members on the same basis as national banks.

Each Federal Reserve Bank has nine directors who are divided into ree classes. The three "Class A" directors are elected by the member ınks of that district to represent their banking interests. The three "Class ' directors are businessmen who are elected by the member banks to rep- sent the business interests of the district. The three "Class C" directors e appointed by the Federal Reserve Board to represent the board's in- 'est in the operation of the particular Federal Reserve Bank. These di- :tors determine the policies of their respective Federal Reserve Banks thin the limits prescribed by law and by the regulations of the Federal serve Board.

The Federal Reserve Act amended the national banking laws in several pects, chiefly, however, with regard to the reserves required of national ıks. The act reduced the demand-deposit reserve requirement of central erve city banks (New York and Chicago are now the only cities so des- ated), reserve city banks, and country banks to 18 per cent, 15 per cent, l 12 per cent respectively. The reserve requirement for time deposits was at 5 per cent. A later amendment to the Federal Reserve Act still further uced the legal demand-deposit reserve requirements of these classes of ıber banks to 13 per cent, 10 per cent, and 7 per cent respectively and reserve required of all member banks against their time deposits to 3 cent.[1] Each member bank is required to keep its reserves in the form deposit in the Federal Reserve Bank of which it is a member. The cash ch the bank has on hand does not count as a part of its legal reserve. ıs all member banks are depositors in the Federal Reserve Banks of which respectively are members. These deposits are their reserves.

IKING FUNCTIONS OF FEDERAL RESERVE BANKS

Each Federal Reserve Bank performs two related, but separate, sets of tions—banking functions and note-issue functions. The banking func- were designed by the Federal Reserve Act to be those of rediscount-

[1] Although the Board of Governors of the Federal Reserve System, acting under rity given it by the Banking Act of 1935, has raised the reserve requirements to e their former level for reasons of policy, the percentages given above are the basic e requirements to the present time.

ing commercial paper for member banks and serving as depositories for the reserves of member banks. The only other depositor in Federal Reserve Banks is the Treasury of the United States.

Member banks can create deposits in Federal Reserve Banks in any of four ways: (1) by the deposit of cash in a Federal Reserve Bank; (2) by the sale of assets to a Federal Reserve Bank; (3) by the rediscounting of commercial paper with a Federal Reserve Bank; (4) by borrowing from a Federal Reserve Bank on a member bank's own note, which note may be secured by commercial paper or by government obligations. The third of these methods was intended originally to be the typical means by which member banks would make deposits in Federal Reserve Banks.

"Commercial paper" is the name given to credit instruments arising from *commercial* transactions. The method by which a member bank secures a deposit in a Federal Reserve Bank by a rediscount of commercial paper can perhaps be described best by reverting to the illustration given at the close of Chapter 19. It will be recalled that a wholesale merchant in St. Louis had bought a bill of goods from a manufacturer in New York. The buyer (or his bank) had accepted a bill of exchange which enabled him to get the goods, and which also obligated him to pay $10,000 ninety days from the date of the bill. The Corn Exchange Bank had handled this transaction for its customer, the New York manufacturer, and had credited the account of the latter with the "discounted" face amount of the bill.

Let us suppose, now, that the Corn Exchange Bank needs to increase its banking reserve by making a deposit in the Federal Reserve Bank of New York. In order to make this deposit, the bank sends the bill of exchange, whose history we have traced, to the New York Federal Reserve Bank. It will be recalled that the bank charged a discount of 4 per cent per annum to its customer when it made this loan. It will now rediscount the bill of exchange with the Federal Reserve Bank at a rate of, say, 3 per cent per annum. This means simply that the Federal Reserve Bank will credit the account of the member bank with $10,000 minus 3 per cent per annum for ninety days, or $9,925. This, in turn, means a $9,925 net addition to the deposit of the Corn Exchange Bank in the Federal Reserve Bank.

This is an example of the rediscount of self-liquidating commercial paper, the bill of exchange having originated out of a commercial transaction. It was presumed that the goods which were bought by the New York wholesaler would be sold within the ninety days allowed in the credit transaction. Thus it may also be presumed that the borrower made payment out of the proceeds from the sale of the goods themselves.

It was originally stipulated in the Federal Reserve Act that only commercial paper of not more than ninety days' duration might be rediscounted by member banks at Federal Reserve Banks. Exception was made in the case of agricultural paper, since the turnover in agriculture is relatively slow. Thus the Federal Reserve Act provided that agricultural paper having a duration of nine months might be rediscounted on the same basis as ordinary ninety-day commercial paper.

The theory on which all this system of reserve banking rested was that the mechanism of the Federal Reserve System would permit expansions of credit during periods of marked business activity, and would bring reductions in the amount of credit outstanding in periods when business activity slackened. This theory assumes that the banking system should respond to conditions of business—that the banking system's relation to the volume of business should be a passive rather than an active one. According to this principle, whenever business expands, banks will extend more credit. During periods of active business the banks have more commercial paper which they can rediscount at Federal Reserve Banks; thus they build up their reserves against increased deposits. The increased deposits would result from increased lending to customers.

CHANGES IN CENTRAL BANKING OPERATION

It is important to observe that this theory has been honored chiefly in the breach. The supply of eligible commercial paper never was adequate for the purpose indicated. To a growing extent member banks have tended to replenish their reserves either by discounting their own notes, secured by collateral (usually government securities), at the Federal Reserve Banks, or by selling bank acceptances or securities of the United States (chiefly the latter) to the Federal Reserve Banks. The increasing tendency of the entire banking system to hold government bonds rather than commercial paper has developed during the past thirty years for several reasons: (1) the decline in the relative importance of foreign commerce, formerly a fruitful source of bills of exchange; (2) the rise of "self-financing" by business from undivided profits (see Chapter 22); (3) the government's sudden and enormous demands for funds occasioned by two World Wars (see Chapter 21). Originally established to provide an elastic supply of credit to business, the Reserve System has tended more and more to view its main function as the provision of a market for government bonds.

While, therefore, commercial banks can at all times replenish their reserves without difficulty, it should not be thought that they can expand

their deposits with the Reserve Banks indefinitely. As the Reserve Banks lend more, their own reserve ratios fall. If this happens, they may be expected to increase their rediscount rates, thus forcing commercial banks to raise their interest rates to borrowers, this in turn causing the amount of lending by commercial banks to increase less rapidly, or even to decrease. Federal Reserve Banks, like commercial banks, may not allow *their* reserves to fall below a minimum set by law. The Federal Reserve Act required Federal Reserve Banks to maintain reserves of not less than 35 per cent in gold or lawful money against their deposits.[1]

In passing, it will be of interest to observe the expansive capacity given to bank credit by the system of banking reserves established by the Federal Reserve Act. Under the original reserve requirements of member banks (13 per cent, 10 per cent, and 7 per cent according to the classification of particular banks), one dollar of deposit by a member bank in a Federal Reserve Bank would provide reserve, on the average, for ten dollars of demand-deposit liabilities of the member bank. Each dollar of gold or lawful money held in the banking reserve of a Federal Reserve Bank serves as reserve for almost three dollars of its own deposit liabilities. Thus each dollar of gold or lawful money in a Federal Reserve Bank's banking reserve would support through this structure a maximum of almost thirty dollars of demand-deposit liabilities of member banks. In 1936 and 1937 the Board of Governors of the Federal Reserve System, acting under authority given it by the Banking Act of 1935, doubled the reserve requirements of member banks. This reduced the member-bank deposit liability which can be supported by a given banking reserve of a Federal Reserve Bank to one-half the former amount. The maximum possible ratio is now somewhat less than fifteen to one and the actual ratio is, at present, much lower than that.

OPEN-MARKET OPERATIONS

One of the serious problems which was involved in planning the Federal Reserve System was that of making the changes in the rediscount rates charged by Federal Reserve Banks "effective," in the sense that an increase in rediscount rates would cause rates charged by commercial banks to their customers to rise, and a decline in the rediscount rate would cause rates charged by commercial banks to their customers to fall. It is only by making changes in the Federal Reserve rediscount rate effective in this sense

[1] "Lawful money" means any and all money issued by the federal government, but does not include currency issued by Federal Reserve Banks and national banks.

at the Federal Reserve System is able to "apply the brakes" to either flation or deflation of commercial bank credit. The method which was ovided in the Federal Reserve Act for accomplishing this purpose is rough what is called the "open-market operations" of the Federal Re- ve Banks.

Whenever Federal Reserve Banks want member banks to lower the es which they charge their customers (i.e., to make credit "easier"), the deral Reserve Banks lower their rediscount rates to member banks. If mber banks do not respond to this by lowering the interest rates they arge their customers, the Federal Reserve Banks go into the market as ge-scale *buyers* of commercial paper, bank acceptances, obligations of United States, and other specified forms of credit instruments. The ect of this heavy buying by Federal Reserve Banks is to increase some- at the prices at which commercial paper or United States bonds are d in the market. This rise of prices is an inducement to the owners of h credit instruments to sell them. A Federal Reserve Bank which buys his fashion pays the sellers with checks drawn against itself. The sellers n deposit the checks in the commercial banks with which they do busi- s. The banks, in turn, can do nothing with these checks except send m to the Federal Reserve Banks of which they respectively are mem- s. The Federal Reserve Banks credit the accounts of the member banks h the amounts of the checks. This causes the reserves of the member ks to be larger than they formerly were. It is looked upon as good bank- practice, whenever reserves are larger than they need to be, to extend s more liberally—which means, in effect, to make loans at lower rates of rest. Although the relationship is not always precise, we can see in a eral way that, the more willing the banks are to lend, the less they will ge for loans. Thus, in this roundabout fashion, the Federal Reserve ks help cause lower rates to be charged by commercial banks to their omers.

When the Federal Reserve Banks want to make "effective" an increase ieir rediscount rate, they act in the opposite fashion from the one de- ed above. They go into the market as heavy *sellers* of bank accept- s or United States bonds. Their large sales cause the market value of nercial paper or United States bonds to decline somewhat. This acts inducement to firms and individuals to buy. The buyers pay for what buy with checks drawn against their accounts in commercial banks. Federal Reserve Banks receiving these checks charge them against the unts of the member banks on which they are drawn. This, of course, s reserves of member banks to be smaller than they formerly were.

The fact that their banking reserves ordinarily can, under these conditions, only be replenished again by rediscounting commercial paper, or discounting their own secured notes, at the new higher rates charged by the Federal Reserve Banks, causes the member banks to increase the rates of interest which they charge customers.

NOTE-ISSUE FUNCTIONS OF FEDERAL RESERVE BANKS

When member banks wish to secure added currency they draw against their accounts in the Federal Reserve Banks of which they respectively are members. Under the law, a reserve of not less than 25 per cent in gold (since 1933, in gold certificates) must be held by a Federal Reserve Bank against the amount of Federal Reserve notes it issues. Collateral security sufficient to make a total backing of 100 per cent is required. When, in 1933, the gold reserve held against Federal Reserve notes was converted into a "gold-certificate reserve," the Federal Treasury gave gold certificates to the Reserve Banks in exchange for their gold.

As was pointed out above, Federal Reserve notes are issued against reserves for their redemption amounting to 100 per cent of the dollar value of the notes, and these reserves must consist of *at least* 25 per cent in gold certificates and the remainder in collateral. The collateral to be used by Reserve Banks to secure their notes may consist of: (1) commercial paper which has been rediscounted for member banks; (2) bank acceptances; (3) promissory notes of member banks secured either by commercial paper or by United States securities; (4) notes, drafts, and bills of customers of member banks drawn for the purpose of investing or trading in United States securities.

The original intention expressed in the Federal Reserve Act, as regards note issue, was to provide the nation with an "elastic" currency. The act originally provided that the collateral to be used, in addition to gold, as security for Federal Reserve notes must consist exclusively of commercial paper. The theory behind this requirement was that an expansion of business would be accompanied by an increase in the amount of commercial paper rediscounted by Federal Reserve Banks, and that this would provide security for an increase in the issue of Federal Reserve notes. Thus an increase in the volume of business would give rise to a need for larger amounts of currency in circulation, and would, at the same time, provide the basis upon which the additional currency would be issued. Conversely, it was expected that a decline in the volume of business would be accompanied by a decrease in the amount of commercial paper rediscounted by Federal

Reserve Banks and that this would lead to a reduction in the amount of Federal Reserve notes issued.

This theoretical basis for elasticity in the currency issued by Federal Reserve Banks is, of course, a part of the larger theory of elasticity of credit which was contemplated by the Federal Reserve Act. At this point it is important to observe that the original principle by which commercial paper was to constitute the sole collateral security for the issuance of Federal Reserve notes has been deviated from more than it has been observed. Of the four kinds of collateral backing for Federal Reserve notes which are mentioned above (the last three of them made legal by amendments to the original Federal Reserve Act), commercial paper is today the least important. For some years the total amount of commercial paper held as backing for Federal Reserve notes has been negligible. To the extent that the other types of collateral—*which do not tend to vary in quantity with changes in the volume of business*—have come to be used for this purpose, the currency issued by the Federal Reserve Banks has lost the automatic elasticity which originally was sought. The discretionary power of the Board of Governors has correspondingly increased.

THE BACKGROUND OF NEW DEAL LEGISLATION

The year 1933 marks a turning point in the history of the Federal Reserve System. The banking crisis of that year (the most dramatic feature of which was the "banking holiday" following immediately upon the inauguration of President Roosevelt) precipitated certain changes in the laws governing commercial banking and in the administration of the Federal Reserve System. But the banking crisis of 1933, while it developed with great rapidity, was the outcome of causes running back through the preceding years.

The major weaknesses of American banking were the isolation and lack of diversification of the individual bank. Because branch banking was discouraged, the fortunes of the individual bank commonly were bound up with those of a particular section, and often of a particular industry, e.g., agriculture. This prevented diversification. Yet if the resources of an isolated bank should become strained, depositors were not insured against loss, nor did any agency of nation-wide scope stand ready to come to their rescue. These weaknesses lay dormant until they were revealed by the post-1929 decline in prices which made it difficult for banks to collect from their debtors.

Prior to the New Deal reforms, banks also suffered from the too close connection between commercial and investment banking. State and national banking laws strictly limit the types of assets commercial banks may hold. Unfortunately these laws had been circumvented by many commercial banks through the establishment of investment-banking affiliates. These affiliates could legally hold assets, e.g., real estate, stocks and bonds, which the parent commercial bank was itself debarred from holding. Through their affiliates banks might become owners of speculative securities or other potentially illiquid assets; and the affiliates were not subject to the inspection and publicity which had long been enforced upon commercial banks.

Finally, the failure of the Reserve System to prevent the stock-market boom which culminated in the fall of 1929, and its failure to mitigate the subsequent depression, led to demands that it be given greater powers. Critics complained that stronger central control was needed, both over the volume of credit and over the use to which credit was put.

REFORMS OF COMMERCIAL BANKING

It is with the weaknesses and abuses described above that reforms of the banking system since 1933 have been principally concerned. Whether the specific action that has been taken toward each of these problems is the most effective that might have been taken lies beyond consideration here. In judging particular measures it should be borne in mind that the task assumed by reformers was the delicate one of dealing with these problems without, at the same time, changing the fundamental structure of the banking system. Efforts were made to conserve existing banks and to protect them against existing dangers to their solvency. Such policy could only within narrow limits work also to impose higher banking standards and to squeeze out the unfit among banks and bankers. Some of the measures taken affect individual commercial banks, and some affect the Federal Reserve System. Those affecting individual banks will be considered first.

The principal New Deal measures with regard to banking are the Banking Acts of 1933 and 1935. These two acts overlap in parts, and no attempt is made here to describe the provisions of each act. It rather is attempted to indicate the *principal* changes in the laws affecting banking that have occurred since 1933.

Dealing in securities. One of the first reforms undertaken was to deprive the commercial banks of the investment-banking functions which they had come more and more to perform through the medium of "security affiliates." Well-known examples of such affiliates were the Chase-Harris-

Forbes Company (Chase National Bank), the National City Company (National City Bank), the Guaranty Company (Guaranty Trust Company). But besides these three largest New York banks there were hundreds of such affiliates of smaller banks in cities and towns throughout the country. The ways in which such dealings as these led to an undesirable confusion of commercial and investment banking were mentioned above. Since 1933 member banks have not been permitted to deal in securities or to maintain security affiliates to deal in them.

Consistency in this policy was shown in a further provision prohibiting the acceptance of deposits by investment-banking firms. If it is undesirable for commercial banks to engage in investment functions, it must on similar grounds also be undesirable for investment banks to engage in commercial-banking functions. Private banking houses (e.g., J. P. Morgan & Company and Kuhn, Loeb & Company) were compelled to choose between giving up their security business and giving up their deposit-banking business; investment-banking houses were also prevented from making new incursions into the commercial-banking field.

Branch banking. Some students of American banking long have maintained that safer and more efficient bank organization would be achieved if large banks were permitted to expand still further through the maintenance of branches. Greater safety would, according to this belief, come from a wider distribution of loans along both geographical and industrial lines. An implication of the same argument appears to be that large banks tend to be more efficiently managed than small ones, and that those defects in the banking system which come from the existence of such a large number of separate banks would be lessened if small banks gave way to large branch-banking chains. The "little men" in the banking field have resisted this view and, until recently, branch banking has not been permitted by law. By 1933, however, sixteen states permitted branches to be established by the state banks in their jurisdictions. In these states limitations were imposed as to the areas, and as to the conditions, in which branches could be established. In that year Congress granted permission to national banks to establish branches in those states which gave this privilege to their state-chartered banks. It appears that, of the considerations which influenced this action by Congress, the principal one was that of giving national banks competitive equality with state banks, rather than any far-reaching aim to strengthen the banking structure.

Real-estate loans. Recent federal law allows national banks greater latitude in the granting of real-estate loans. Loans up to 60 per cent of the appraised value of real estate are permitted on condition that regular amorti-

zation is provided. Otherwise the loan extension is limited to 50 per cent of the appraised value of the property with a maturity of five years. In the aggregate a national bank is permitted to extend loans on real estate not to exceed its capital and surplus, or 60 per cent of its time and savings deposits, whichever is the larger sum.

The purpose of this change was to provide a greater outlet for bank funds and to induce business recovery through promoting a revival of the construction industry. Its advocates claimed that the loss record in real-estate loans was no worse in the depression period than that of many other types of loans and investments. Through changes in the rediscount provisions of the Federal Reserve Act, real-estate loans have been made "liquid" in the sense that they could, in event of need, be shifted to the Reserve Banks.

The critics of the change maintained that losses to commercial banks on real-estate loan defaults have been very large and were the cause of numerous bank failures. Granted that urban mortgage credit is a neglected phase of banking in this country, such mortgages should be handled either by existing savings banks and building and loan associations, or by specially created mortgage banks, but not by commercial banks. An increase in the amount of mortgage loans granted by commercial banks would, it is claimed, result in a weakening of the banking structure.

Guarantee of deposits. The Banking Acts of both 1933 and 1935 made provisions for what was called in the acts the "insurance" of bank deposits. This is a misnomer, inasmuch as the risk of loss incurred by bank depositors is not subject to actuarial principles. What was provided may more properly be called limited guarantee of deposits by the participating banks.

Provision was made for the guarantee of deposits up to an amount of $5,000 each. Deposits in excess of this amount are not guaranteed. While, under this limitation, about 98 per cent of the total number of separate deposit accounts are guaranteed, only about 44 per cent of the total amount of bank deposits are guaranteed by the provisions of the law. The accounts which are larger than $5,000, and so are not fully guaranteed, consist principally of deposit balances kept by corporations and by banks with their correspondent banks.

Under this plan, the stated deposits of *each* bank are guaranteed—within limits—by *all* of the banks participating in the plan. The law requires every bank that is a member of the Federal Reserve System to become also a member of the Federal Deposit Insurance Corporation. Nonmember banks are permitted to participate, but it was provided that after July 1, 1942, all

such banks having deposits of one million dollars or more should become members of the Federal Reserve System. Each participating bank assumes a limited contingent liability; each can be called upon to contribute to the corporation an amount not greater than one-twelfth of 1 per cent of its total deposits in any one year.

The idea of deposit guarantee is not new in American banking. In the decade following the panic of 1907, eight states, located principally in the West, enacted guaranty laws. Without exception all such plans failed after a few initial years of apparently successful operation. The schemes adopted were not able to withstand the losses incurred in the epidemic of bank failures after World War I. It must be emphasized that the state plans applied only to state banks. National banks necessarily were immune from the provisions of these laws. Hence the base of the plan was restricted, and the states adopting the plan were located for the most part in agricultural sections lacking a diversity of economic interest. The banks became involved in the vicissitudes of one or more local industries—especially of agriculture.

The present federal plan of deposit guarantee has a better chance for success than the state plans previously in existence. In the first place, the number of banks included is larger. The membership in the plan is spread over the entire nation, securing the widest possible distribution of risk. Secondly, the Federal Deposit Insurance Corporation has been given extensive powers of examination of member banks and is permitted to terminate the membership of any bank engaged in unsafe or unsound practices. As long as the act is well administered, high standards can be maintained.

The existing plan of guarantee places a heavier burden upon large-city banks than upon those in smaller places. Assessments are levied upon total deposits, whereas the proportions of guaranteed deposits of large-city banks are relatively small. This is particularly the situation with regard to New York City banks; in the case of the Guaranty Trust Company, for example, it has been estimated that only 6 per cent of its deposits are subject to the guarantee, while assessments, of course, will be levied against all of its deposits.

Obviously the guarantee of bank deposits does not itself prevent bank failures. This can be accomplished only by having the management of banks in competent hands, by maintaining careful official supervision of bank assets, and by wise monetary policy on the part of the government and of the Federal Reserve administration. Yet the requirement that the larger of the nonmember banks, in order to participate in the plan of guarantee, must join the Federal Reserve System promises to place more banks under

Federal Reserve supervision and to force out of existence some banks which are not able to qualify for Federal Reserve membership.

REFORMS OF THE FEDERAL RESERVE SYSTEM

Recent changes in the federal banking laws have served to concentrate more and more power in the hands of the Board of Governors of the Federal Reserve System. This increased control by the board consists of both greater authority over the affairs of individual member banks and greater power over the policies of the several Federal Reserve Banks. The first of these extensions of control is illustrated by the power given the board, by the Banking Act of 1933, to prevent speculation with Federal Reserve credit by making loans to member banks only for commercial purposes. The second is illustrated by the provision of the 1935 Act which makes the president of each Federal Reserve Bank (who is elected by the Board of Directors of that bank) subject to approval by the Board of Governors. Specific ways in which authority has been centralized in the hands of the board will appear in the summary descriptions of recent reforms of central banking which appear below.

Advances to member banks. Recent legislation provides that any Federal Reserve Bank, under rules and regulations prescribed by the Board of Governors of the Federal Reserve System, may make advances to any member bank on its time or demand notes having maturities of not more than four months and which are secured to the satisfaction of such Federal Reserve Bank. Each such note is to bear interest at a rate not less than one-half of 1 per cent per annum higher than the highest discount rate in effect at the Reserve Bank at the time that the advance has been granted. Proponents of this measure have argued that its purpose is to remove the stringent technical limitations on the character of paper which might be used as a basis of rediscounts with the Reserve Banks. Changes in methods of financing, so they declared, had basically altered the composition of the portfolios of member banks. The volume of short-term self-liquidating paper had been reduced. This change also, according to this view, makes membership in the Federal Reserve System more attractive and member banks will be induced to invest their savings funds in longer loans. Soundness of assets, it is argued, is a greater safeguard than the maturity of the loan or the form of the underlying transactions.

The critics of this change emphasize its far-reaching importance in making all assets of member banks, whether of a commercial character or not, eligible for use in securing credit from the Reserve Banks. They point

out that the authorization of use by member banks of non-self-liquidating credit instruments as a basis for building up their reserve accounts at the Federal Reserve Banks will cause member banks to set less importance on the liquidity of their assets. Hence, they say, it may well lead to greater illiquidity in the character of both member-bank and Federal Reserve Bank assets.

Member-bank reserve requirements. We have seen that control over the volume of lending by commercial banks rests principally upon the ability of the Reserve Banks to influence the relation between the actual size of member-bank reserves and their minimum size as required by law. Prior to 1935 the influence of the Reserve System was practically confined to variations produced in the absolute size of member-bank reserves through open-market sales and purchases of securities. At times when actual reserves do not greatly exceed the amount required by law—when, that is, member banks' "excess reserves" are not large—control through open-market policy may be reasonably effective. During the 1930's, however, owing partly to a smaller use of bank credit by business and partly to the transfer to this country of foreign funds for safekeeping, excess reserves increased rapidly, and by 1940 excess reserves were about twice required reserves. The potential lending power of the commercial banks had thus increased to a dangerous degree. For the Reserve System to have reduced these excess reserves to manageable proportions through the sale of securities would thoroughly have disorganized the bond market.

The Banking Act of 1935 recognized, and anticipated the aggravation, of this situation by placing in the hands of the Reserve System a new and effective weapon of control: power to vary reserve requirements of member banks. The Board of Governors in Washington may now set requirements anywhere between the percentage level previously established by law and as much as twice that level—i.e., between 7 per cent, 10 per cent, and 13 per cent of demand deposits (according to the class of bank) and 14 per cent, 20 per cent and 26 per cent respectively; and between 3 and 6 per cent of time deposits. In 1941, as credit expanded in the boom resulting from the outbreak of World War II, the power to raise reserve requirements was exercised to the full. Later, in 1942, as the Treasury found it difficult to finance the war effort without borrowing substantial sums directly or indirectly from the commercial banks, New York and Chicago banks began to run short of reserves. Reserve requirements against demand deposits in central reserve city banks were therefore lowered again from 26 per cent to 20 per cent. Experience has already shown that power to vary reserve requirements affords a valuable adjunct to open-market policy.

CHAPTER TWENTY-ONE

Money, banking, and public policy

From some points of view, monetary problems do not have more than a secondary importance in economic life. They are, of course, by no means as fundamental as material resources. Yet, as has already been shown, a badly behaved monetary system can create effective restrictions against a full use of these resources. In some respects a failure to make use of resources is worse than not having them at all; for it is abundantly clear that the realization that productive resources somehow cannot be brought into use to meet the crying needs of great numbers of people breeds social discontent. From our present point of view the monetary system of a country is simply a means to an end: the most efficient use of the human and other resources of the country for satisfying the needs of its people. It is by this touchstone that the existing banking structure and methods currently used for the control of credit, as well as proposals for their reform, must be judged.

During the decade of the 1930's the principal policy issues in money and banking reflected concern for the safety of bank deposits, a desire to limit the use of bank credit for stock speculation, and a belief that the powers of the Federal Reserve System to control credit needed strengthening. How these issues were resolved through Congressional enactment of several important reforms was described in the preceding chapter. Other policy issues which have come to the front during recent years, have not yet been resolved, and are the subject of much current discussion, form the topics to be considered in the present chapter. These issues concern: (1) the monetary standard and the future role of the precious metals; (2) the legacy of war finance and the problem of the banks' swollen holdings of government debt; (3) the role of the banking system in the control of the

price level and business activity. The three problems mentioned are not separate and distinct, but—as will appear—are closely interconnected.

MONETARY STANDARDS

In every highly developed modern economy there has, until quite recently, tended to be some "monetary standard," which is a stipulated valuable commodity into which such exchange devices as paper currency or bank checks can be converted. Each unit of money (e.g., a dollar) is made by law convertible into a definite quantity of the monetary standard (e.g., gold). Although silver has been widely used as a monetary standard, the more recent tendency among the most important commercial nations has been to employ gold as a single monetary standard. Most of the attempts in recent times to use silver as a monetary standard have been through making the money of a country convertible either into silver or into gold—which is the monetary system known as bimetallism.

The bimetallic standard was established in the United States by act of Congress in 1792 following the report of Alexander Hamilton on the establishment of the mint. During all the period of bimetallism in this country the mints were coining, free of charge, all gold and all silver that anyone brought to them. This coinage was done at a regularly established "mint ratio," which measured the difference in value of the two metals. This ratio was changed from time to time, but varied only between the narrow limits of 15 to 1 and 16 to 1. The ratio 16 to 1 means simply that an ounce of gold was worth sixteen times as many dollars as an ounce of silver. The weights of the gold and silver dollars were adjusted according to this mint ratio. It is not necessary here to survey the long history of monetary development in this country beyond pointing out that the bimetallic system did not provide a stable and adequate system of money.

The unsatisfactory experience with bimetallism led Congress, in 1900, to pass the Gold Standard Act, which had the effect of making all money issued by the United States government convertible into gold. From the passage of this act until March 1933 this country remained consistently on the gold standard. For ten months after March 1933 the United States was simply "off" the gold standard, in that the money in circulation was not convertible into gold. The "modified bullion standard," which has been in operation since January 1934, will be described below.

THE GOLD STANDARD

The gold standard has been defined by E. W. Kemmerer as "a monetary system in which the unit of value, be it the dollar, the franc, the pound, or some other unit in which prices and wages are customarily expressed and in which debts are usually contracted, consists of the value of a fixed quantity of gold in a free gold market." In addition to the conditions stated in this definition, it is customary to have associated with the gold standard free coinage of gold and convertibility of paper money into gold coins. Free coinage of gold means simply that the mint will convert into coins without charge any and all gold which is brought to it. Thus, in the United States—where the gold dollar, until the abandonment of the gold standard in 1933, contained 23.22 grains of pure gold—any person who took gold to the mint would receive one dollar for each 23.22 grains of pure gold, minus a small charge for the alloy mixed with the gold in coinage.

Gold possesses in unusual degree the qualities desirable in a monetary standard. It has, by comparison to most other things, a considerable stability of value due to the conditions of its production and to its durability. Because it is relatively indestructible, the quantity of it in existence does not diminish rapidly (although variations may occur between its uses as money and in the arts). Because of the limited sources of its production, the amount of it that can be produced in any comparatively short period of time cannot be large in relation to the amount already in use. It is infinitely divisible into pieces without diminution of value—which would not be the case, for example, with diamonds. It is easy to recognize because of both its appearance and its characteristic ring.

INTERNATIONAL ASPECTS OF THE GOLD STANDARD

In the adoption of gold as the monetary standard of particular countries, certain international aspects of the gold standard have played an important part. Trade and financial relations among nations are made more stable and more certain if the several nations having such relations maintain the same monetary standard. The principal industrial and commercial countries—those with the largest dealings in international trade and finance—had for some decades prior to World War I remained consistently "on the gold standard." This had two beneficial general effects on their mutual and respective dealings in the international field.

In the first place, exchange rates remained stable. It always was pos-

sible to exchange the money of one country for that of another at a rate which had remained constant for many years, and which promised to continue so for the predictable future. This was because the currencies of both countries were freely convertible in unlimited quantities into fixed amounts of gold. For instance, for a great many years the "par" of exchange of the British pound sterling in terms of dollars was $4.8665. The price of sterling in dollars tended to remain at that point because the pound contained, and was convertible into, 4.8665 times as much gold as the dollar. If the supply of sterling exchange became scarce in relation to the demand for it, the exchange rate in dollars would rise above $4.8665. If the rate went up as much as two or three cents, it would pay American bankers to ship actual gold to England and to get credit for it in banks there against which they could sell drafts to their customers. If the supply of sterling exchange became sufficiently abundant in relation to demand to cause the price of dollars to rise in terms of pounds, it would pay British bankers to ship gold to the United States. Under these conditions the price of a pound sterling in dollars could fluctuate only between what were called the "gold shipping points"—roughly between $4.84 and $4.89. This made it possible for people in each country to carry on trade, and to enter into contracts, with people in the other country with some assurance that the relative values of the two currencies would not change seriously.

In the second place, the international use of the gold standard has had, at times in the past, a tendency to check price changes within particular countries. Thus if prices tended to decline in the United States and were not declining—or were even rising—in Great Britain, there would be a tendency for the British to buy more goods in this country, and for Americans to buy less from Great Britain. This would lead, according to the tendencies described above, to the shipment of gold from Great Britain to the United States. Thus American banks would have more gold than formerly, and British banks would have less. Under these conditions there would be an increase in available bank credit in the United States, and a decrease in available bank credit in Great Britain. Hence, interest rates would tend to decline in this country and to rise in Great Britain. Since these changes would work toward an increased use of bank credit—and so greater purchasing power—in the United States, and have the opposite effects in Great Britain, the fact that both countries used the gold standard would tend to check price changes in both countries. With increased use of bank credit in the United States prices would tend to rise, while prices in Great Britain would tend to decline, until "parity" had been re-established.

The international gold standard did not, from this second point of view, work as smoothly and automatically after World War I as it did prior to 1914. First, banking practices, extensions of credit between countries, and interference by governments in the foreign-exchange market impeded the flow of gold between nations. Second, tariff practices and (during the 1930's) the frequent imposition of import quotas restricted the free flow of goods from one country to another. Since the outbreak of World War II the international gold standard has altogether ceased to exist. At present no currency is fully convertible into gold, and international shipments of the metal occur only on government account. Whether and in what form the international gold standard will function in the future remains to be decided. As a contribution to the reconstruction of the world economy, an attempt will shortly be made to recapture some at least of its benefits. The free convertibility of one currency into another at a price fixed within narrow limits is to be gradually restored under the auspices of the International Bank for Reconstruction and Development and the International Monetary Fund organized in Washington in 1946. The freer movement of goods has been proposed in tariff and other agreements negotiated through the International Trade Organization, an organ of the United Nations. These matters are discussed below in Chapter 29.

THE GOLD STANDARD AND THE VALUE OF MONEY

Although the gold standard conferred important benefits—particularly in the field of international trade—there is no doubt that it failed to provide the hoped-for stability in the purchasing power of money. We should recognize, however, that the extreme oscillations in the value of money which have occurred in the recent past may not have been due so much to any inherent instability in the value of gold as to other factors. A system of money which is based on convertibility into gold has many other characteristics which affect the value of the monetary unit. A particularly important characteristic of this kind is the system of commercial banking. Let us suppose, for example, that banks increase their deposits through extensions of credit at a rate more rapid than the supplies of goods and services are being increased. The result will be that buyers of goods and services will have more money with which to buy. If they use this greater purchasing power by actually buying goods and services, there will be a strong tendency for the "general level of prices" to rise. This is another way of saying that the "purchasing power of the dollar" will fall. Conversely, through a net reduction of deposits by liquidation of loans, there may (unless the

upplies of goods and services also are reduced by appropriate amounts and t appropriate rates) result a fall in the "general level of prices"; that is, a ise in the "purchasing power of the dollar." Both of these conditions have pplied, at different times, during the past two decades. A marked decline n the purchasing power of the dollar occurred during the inflationary eriods which followed World Wars I and II; a sharp rise in the purchas-ng power of money took place during the deflation of 1929-33.

The question arises as to whether the wide fluctuations in the value of noney experienced in the United States during the past thirty years and nore were *caused* by the existence of the gold standard. It seems probable nat they were not. It is clear, of course, that the precise *ways* in which nese changes occurred in the value of the dollar were determined in large neasure by the use of a gold monetary base in this country. But changes in ne value of money appear to occur even more rapidly and with even reater violence in countries which either do not have a metallic monetary ase, or have been forced to abandon such a base. Among the most con-picuous historic examples are the depreciation of the *assignats* in eighteenth-entury France, and the inflation period in Germany during and after World Var I. More recent instances are furnished by the currencies of Hungary nd China, both of which have become virtually valueless since the close of Vorld War II.

As regards the "value" of gold itself, it should be clear that the gold andard does not fix the *purchasing power* of a given quantity of gold; it erely fixes its *price*. For many years the price of pure gold in this country as exactly $20.67 an ounce (i.e., 23.22 grains = one dollar). Since January 34 its price has been exactly $35.00 an ounce. These exact prices have pre-iled simply because gold has been bought and sold at these prices by the nited States mints. It used to be thought that the value of gold as money as determined by its value for use as ornament. A more plausible view pears to be that its price for all other uses is determined by the price at nich it is bought and sold at the mints. This is essentially what people ean when they say that the demonetization of gold would destroy much the value of the enormous quantity of gold now held in this country.

In concluding this discussion of the gold standard, it seems appropriate point out that nothing said here is intended to imply that the gold stand-d, as we know it, provides the ultimate system of money, or even the ost satisfactory system that is conceivable. It is, for one thing, an expensive stem. The "carrying cost" of large sums of monetary gold amounts to a nsiderable burden for the community to bear. Gold bars in the vaults of a tional treasury or of a central bank, or even gold coins in the pockets of

individual people, while constituting wealth to the nation or the bank or the person, fall definitely within the category of "nonearning assets." If pieces of paper, entirely unrelated to gold, can be made to do all the work that is required of a satisfactory money, the cost that the monetary use of gold entails can be averted. On the other hand, it is clear that the maintenance of a satisfactory monetary system has a very large value to the community. If the gold standard is sufficiently superior in this respect to some alternative system, it follows that it is worth what it costs in excess of the cost of the alternative system.

This is an area in which invention carries with it many subtle and serious dangers. To change from an established system of money to a new and untried one carries with it great hazards for many people. If the effects are extreme, as when—simply because people lack confidence in the money being used—it becomes impossible for exchanges to take place or for contracts to be made, the costs in terms of market collapses and lost production may quickly become much greater than any possible savings from avoiding the use of gold. Monetary invention also is faced with the necessity of recognizing that the kind of monetary system that will "work" efficiently in a country or an era with one kind of economic and political organization will not necessarily have the same beneficial effects in another country or era in which these economic and political characteristics are entirely different. Before credit was as highly developed, both within and between nations, as it is today the precious metals undoubtedly played an indispensable role in commercial transactions. Whether we could now do equally well without a gold basis for our credit structure, or with far less gold than we actually use for the purpose, is a question which has been hotly debated.

Certainly a substantial fraction of this country's wealth is tied up in the form of gold bars buried in vaults at Fort Knox in Kentucky and elsewhere. Monetary gold held in the United States (other than that earmarked for foreign account, i.e., owned by foreigners) amounted late in 1948 to almost $24,000,000,000, or between two-thirds and three-quarters of the world's entire stock of gold used for monetary purposes. In this connection the problem uppermost in the minds of many people is whether the gold itself may not diminish greatly in value should the gold standard as an international monetary system fail to be revived. If, in the future, international payments are settled, not by the physical transfer of gold bars from one country to another, but by the transfer of balances on the books of the newly founded International Monetary Fund, it would appear that the role of the yellow metal will be still further reduced in scope. In that event the

maintenance of the value of gold will come to depend ever more completely upon the continued willingness of the United States Treasury to buy freshly mined gold at $35 an ounce. Nor at the present time do the prospects seem good for persuading other countries to hold larger amounts of gold, and for reducing the very large stock held by the United States.

GOLD AND SILVER POLICIES OF THE UNITED STATES

The gold policy. The convertibility of currency into gold was abandoned by the federal government in March 1933. For months after this virtual abandonment of the gold standard there was very little certainty as to the stability of the currency. The President had been authorized by Congress to depreciate the value of the dollar in relation to gold. The only clear line of policy which was indicated in this period was the intention of the President to reduce the gold value of the dollar, but just how or how much was not so clear.

In January 1934 Congress passed the Gold Reserve Act which clarified American monetary policy somewhat and fixed certain limits to devaluation. This act of Congress aimed at making the American dollar cheaper in terms of foreign currencies. It was believed that such action would stimulate the export of American goods, since a cheaper dollar would enable foreigners to buy American goods for a smaller outlay of their own money. It will be recalled that most of the nations of Europe had abandoned the gold standard before this time. The British pound sterling, for example, had depreciated considerably in terms of dollars. Our own action in abandoning the gold standard in 1933 had caused the dollar also to decline, thus bringing it more nearly to its earlier "parity" relationship to those European currencies which were not on the gold standard. Congress wished to bring about a still further decline in the gold value of the dollar with a view to stimulating still more the export of American goods, and in the belief that such a stimulation of exports would cause increased activity of domestic business, greater domestic employment, and relief to domestic debtors. At the time that the act was passed, the dollar already had declined to about two-thirds of its earlier gold value. The Gold Reserve Act provided:

1. That the gold content of the dollar be reduced to some point between 50 and 60 per cent of its former weight.

2. That the President should, within these limits, make such changes in the gold content of the dollar as he found necessary for the purposes of stabilizing domestic prices and protecting the foreign trade of this country.

3. That the vast stocks of gold held by the Federal Reserve Banks be impounded in the Treasury, this gold to be paid for with gold certificates on the basis of the previously existing gold content of the dollar. This was to insure that the profits on gold due to devaluation would accrue to the government rather than to the banks.

4. That $2,000,000,000 of this profit be set aside and used as a "stabilization fund" to prevent undesired fluctuations of the value of the dollar in foreign currencies, such preventive measures to be carried out through purchases and sales by the Treasury of gold, foreign currencies, and the securities of the United States government.

5. That the United States return ultimately to a new and modified gold standard.

The provision to fix the gold content of the dollar at some point between 50 and 60 per cent of its earlier weight imposed on the President responsibility for manipulating the value of the currency. The gold content of the dollar was fixed at 59.06 per cent of its earlier content. The only apparent reason in the President's mind for this particular point, rather than some other one within the range permitted him by the law, was that with this gold content the price of gold was raised from $20.67 to exactly $35 per ounce.

Other provisions of the Gold Reserve Act require only brief comment. As a result of the transfer of the gold stock from the Federal Reserve System to the Treasury Department, the Reserve Banks came to hold gold certificates—instead of actual gold—as a reserve against their liabilities. However, the practical effect of this change was small.

The establishment of the stabilization fund was a reply to the setting up of a fund by the British government for operation in the exchange market. After the establishment of a similar fund by the French, a tripartite agreement was signed between the three countries in 1936. Thereafter the three funds were to be used by mutual arrangement to secure exchange stability between the dollar, the pound, and the franc—a stability between the values of the world's three chief trading currencies which had not existed since the abandonment of the gold standard by Great Britain in 1931. With the financial strains imposed upon Britain and France by the outbreak of World War II, this co-operation inevitably came to an end. It is planned to secure exchange stability in the future, if not through full convertibility of currencies into gold, then through the operations of the International Monetary Fund (see Chapter 29).

It is important to observe that the Gold Reserve Act did not re-establish the gold standard. The act required that the gold held by the Treasury

be "formed into bars of such weights and degrees of fineness as the Secretary may direct." Thus, there will be no more coinage of gold and "no gold coin shall hereafter be paid out or delivered by the United States." The arrangement by which people may, under exceptional circumstances, get gold from the government is what is called a "modified bullion standard." If some person can give proof that he must have gold in order to make payment in connection with an international transaction, he will be able to get the gold he needs. In order to give such proof, it is necessary for him to show that he cannot buy the currency of that country through an ordinary purchase of foreign exchange.

The silver policy. Another important aspect of recent monetary policy is that affecting silver. The use of silver as money has been, for several decades, insistently demanded by the advocates of "cheap money" and also by members of Congress from the silver-producing states. The Bryan free-silver campaign of 1896 is the outstanding historical example of this insistence. As commodity prices fell after 1929, and to many people gold no longer appeared to offer an adequate monetary base, the efforts of the silver advocates were renewed. Definite action by the government commenced in December 1933 when President Roosevelt, acting under the authority of the "inflation amendment" to the Agricultural Adjustment Act, instructed the Treasury Department to buy newly mined silver at 64.5 cents an ounce—the market price of silver at that time being 43 cents.

In June 1934 Congress passed the Silver Purchase Act. Under this act the price of silver must be forced, by governmental buying, to $1.29 an ounce, or, failing that, the government must continue buying silver until, at that figure, the value of the stock acquired equals one-third that of the stock of gold in the Treasury. In August 1934 the President, under authority of the act, nationalized silver, requiring that it be delivered to the Treasury at a price of 50.01 cents an ounce. By the end of April 1935 the market price of silver had been raised to a peak of about ninety cents an ounce. At that time the total stock of silver which had been purchased by the government stood at about 400,000,000 ounces. But since that time the market price of silver has fallen. During 1940-44 the market price fluctuated between thirty-five and forty-five cents an ounce. Yet domestic producers enjoy a price much higher than that prevailing in the market. By the monetary act of July 6, 1939, Congress instructed the Treasury to buy domestically mined silver at the fixed price of 71.11 cents an ounce. In 1946 the Treasury's buying price was raised to 90.5 cents an ounce, and a shortage of foreign silver forced the market price close to 90 cents an ounce; in 1948 foreign silver was selling for about 75 cents in New York. Purchase by the

Treasury at a price above the market must, obviously, be regarded as a public bounty to the silver-mining industry, rather than as a phase of basic monetary policy. As to the earlier policy—that of increasing the Treasury's stock of silver until, at the arbitrary value of $1.29 an ounce, it equals one-third of the stock of monetary gold—the inflow of gold from abroad has been so great that a vastly greater amount of silver would have to be purchased now than would have been necessary when the Silver Purchase Act was passed in 1934.

As our laws stand at present, silver is not a basic part of our monetary system. There are no strong grounds for believing that the heavy buying of silver has caused any rise in the general level of domestic prices. Its two principal effects thus far have been: (1) increased profits for silver producers and for speculators in silver; (2) monetary embarrassment to those countries which use the silver standard, and whose silver reserves have been drawn away by the heavy buying of our government. The drain was so great in the cases of Mexico and China that both of these countries were compelled to abandon the silver monetary standard.

THE BANKING SYSTEM DURING WORLD WAR II

As explained in Chapter 20, many important reforms of the banking structure were introduced in the 1930's. Especially, control by the Federal Reserve System over the lending activities of the commercial banks was greatly strengthened. At the outbreak of World War II the entire banking system was much more highly centralized than it had been during World War I. Moreover, the controlling authority—the Board of Governors of the Federal Reserve System in Washington—which in 1914 had only just opened for business, in 1939 had a quarter-century's experience back of it. All the signs suggested that the banking system was in much better shape to meet the financial strains imposed by a major war than it had been twenty-five years earlier. At the same time, the strains imposed by the second were much greater than those imposed by the first World War. In neither emergency did government or war industry go short of credit needed for the conduct of the war. On the other hand there occurred on both occasions a marked expansion of bank credit, and a sharp rise in prices and in the cost of living—a sharp decline, that is to say, in the purchasing power of the dollar. As we shall see, despite its greatly enhanced powers of control, the Reserve System was no more able during World War II than during World War I to prevent a substantial dose of inflation of the means of payment.

It has already been explained that the ability of the commercial banks to extend additional credit depends upon their reserve position, that is, upon the degree to which their actual reserves deposited with the Reserve Banks exceed the minimum required by law. The flight of capital from Europe to the United States during the years preceding the outbreak of World War II, and the consequent inflow of gold into this country, had placed the banking system in a very liquid position. By 1940 member-bank reserve balances of about $14,000,000,000 were roughly twice required reserves. In other words, excess reserves of some $7,000,000,000 were available as a basis for credit expansion by member banks. The banks were therefore in a position to make greatly increased funds available should the demand for credit expand as a result of the war. As the defense effort got under way, and was transformed after Pearl Harbor into full-scale mobilization of the nation's resources, greatly increased demands for credit were quick to develop.

Wartime borrowers were of two kinds. The federal government, to pay troops and to purchase munitions and supplies, needed funds greatly in excess of its tax revenues. In addition, manufacturers of military supplies of every variety made increased purchases of labor and materials. In part, this growth of spending by government and by business was a means of absorbing into the war effort previously unused human and natural resources. Housewives, youngsters, and retired workers were drawn into the labor market; untapped reserves of lumber and minerals were brought into production. To pay for these additional resources needed by the war effort, additional expenditures over and above peacetime levels were obviously necessary. However, the mobilization of previously idle resources was sufficient to account only in part for the vast wartime growth in expenditure by government and by business. Much more important was the need to transfer large quantities of already employed resources from peacetime to wartime uses. Materials had to be bid away from peacetime consumers; labor had to be persuaded to work at unfamiliar occupations, often in distant parts of the country. In satisfying the urgent needs of war production it was frequently found necessary to pay more for resources than they had been worth in peacetime. In part, therefore, the increased spending reflected increased use of resources; in part it represented merely a rise in their price.

To some extent manufacturers were able to finance their expanded operations from their own funds, but often they needed additional bank credit. Once the munitions and other supplies were ready for delivery, they were paid for by the federal government. The biggest and most continuous increase in spending was therefore by the United States Treasury. Taxes were in-

creased and tax collections rose from less than $6,000,000,000 in the fiscal year 1939-40 to more than $44,000,000,000 in 1944-45. But throughout the war federal expenditures, which during the last year of the war topped $100,000,000,000, far exceeded tax revenues. The deficit was of course financed by borrowing; between the end of 1940 and the end of 1946 the Treasury borrowed altogether about $207,000,000,000. Of this vast sum a large part—about $129,000,000,000—was borrowed from individuals, or from savings banks, insurance companies, and other institutions outside the commercial banking system. The remainder—about $78,000,000,000—was furnished partly by the commercial banks ($57,000,000,000), and partly by the Federal Reserve Banks ($21,000,000,000).

Broadly speaking, that part of the increased government spending which the Treasury financed by borrowing from persons other than banks was matched by a reduction in spending by those persons who subscribed to issues of war loan. When the lenders were banks, on the other hand, the situation was quite otherwise, for freshly created means of payment were placed at the disposal of the Treasury. The ability of the Reserve Banks to create additional credit was assured by the presence of vast stocks of gold: at the same time the commercial banks had ample excess reserves to support an expansion of their lending operations. The manner in which the Reserve System furnished the Treasury with some $21,000,000,000 toward the cost of the war is shown in Table 17.

Table 17 TWELVE FEDERAL RESERVE BANKS: PRINCIPAL ASSETS AND LIABILITIES, 1940 AND 1946

(in billions of dollars)

	Dec. 31, 1940	Dec. 31, 1946	Change
ASSETS			
Gold certificates	19.8	18.4	— 1.4
U.S. government securities	2.2	23.3	+21.1
LIABILITIES			
Federal Reserve notes	5.9	24.9	+19.0
Member bank reserve balances	14.0	16.1	+ 2.1

It will be seen that Federal Reserve holdings of United States government securities increased about tenfold, but member-bank reserve balances increased only slightly. Excess reserves of member banks were so large in 1940 that they needed only small amounts of additional reserves during the course of the war. Plainly most of the expansion of Reserve Bank credit took the form of greatly increased issues of Federal Reserve notes, i.e., of

ırrency in circulation. This currency went to meet increased pay rolls and ending by the public, and for use by troops and military occupation au-orities overseas.

Let us now see how the commercial banks provided the Treasury with 7,000,000,000 (Table 18).

able 18 ALL COMMERCIAL BANKS IN THE UNITED STATES: PRINCIPAL ASSETS AND LIABILITIES, 1940 AND 1946 *

(in billions of dollars)

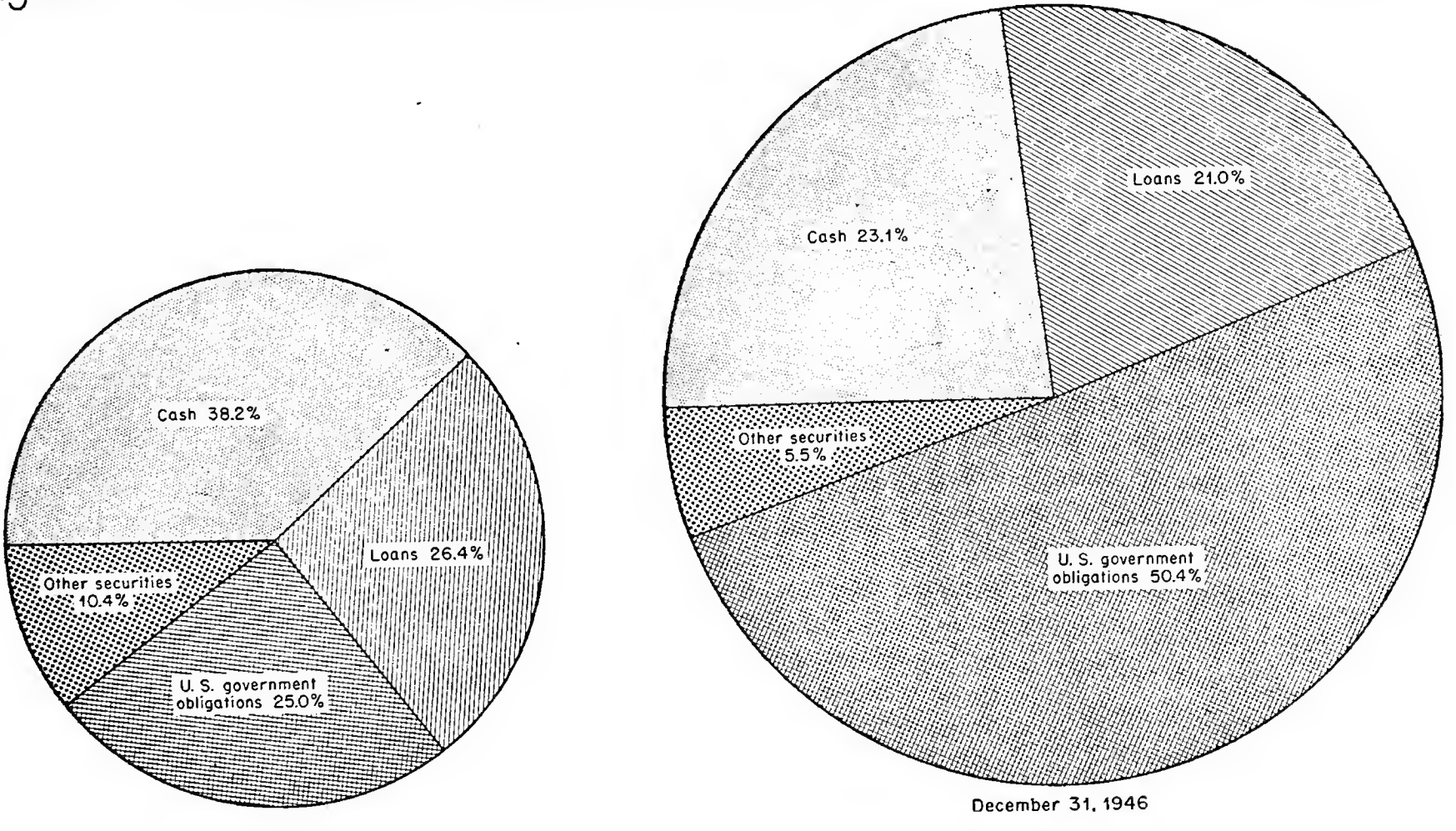
ASSETS	Dec. 31, 1940	Dec. 31, 1946	Change
Loans	18.8	31.1	+12.3
Investments			
U.S. government securities	17.8	74.8	+57.0
Other securities	7.3	8.1	+ 0.8
Total loans and investments	43.9	114.0	+70.1
Ratio of U.S. government securities to total loans and investments	40.5%	65.6%	
LIABILITIES			
Customers' deposits	54.4	126.4	+72.0

* Commercial banks form a slightly more inclusive category than member banks. Figures which ıde nonmember banks disclose an almost identical picture.

ɜ expansion of commercial bank credit during the six-year period may measured by the growth in total loans and investments from $44,000,-,000 to $114,000,000,000. Some additional loans were evidently made to ıess or other borrowers, but by far the largest part of the increase—.000,000,000—comprised additional holdings of United States govern-ıt securities. Since the making of a loan, or the purchase of a security, ı bank involves the creation of a deposit, we naturally expect to find a esponding growth in deposit liabilities. In fact, customers' deposits of ommercial banks rose from $54,000,000,000 on December 31, 1940, to ,000,000,000 on December 31, 1946. We have already seen that the in-se in member-bank reserves was relatively small—about $2,000,000,000. the other hand, excess reserves of nearly $7,000,000,000 in 1940 fell to han $1,000,000,000 in 1946. The changes in amount and distribution of bank assets are shown in Fig. 26.

It is plain that purchasing power in the hands of the public increased ɔly as a result of the wartime financial operations of the government.

Figure 26 **ALL COMMERCIAL BANKS: PERCENTAGE DISTRIBUTION OF ASSETS, 1940 AND 1946**



In summary, commercial-bank customers' deposits rose by $72,000,000,000, and Federal Reserve notes in circulation by $19,000,000,000. These enormous increases in the means of payment evidently resulted from additional lending by banks and enabled the vast wartime increase in spending—by government and by business, but especially by the former—to be financed. As war expenditures declined after the middle of 1945, the expansion in bank credit slowed down; indeed some of the figures quoted for December 31, 1946, had fallen slightly from their wartime peaks. Fortunately or unfortunately, the processes of credit expansion are not easily reversed, and the volume of purchasing power in the hands of the public is likely to remain very much greater than it was prior to the outbreak of World War II. This probability has led many people to believe that the cost of living and commodity prices generally are also unlikely to return to prewar levels.

GOVERNMENT SECURITIES AS BANK ASSETS

In addition to the expansion of bank assets, a marked change has taken place in their character. Thus it will be seen from Table 18 that of all loans and securities of commercial banks in 1940 two-fifths consisted of United States government securities; in 1946 the proportion had risen to two-thirds. For every $100 which the banks had lent to businessmen or private individuals at the latter date they had lent $200 to the federal government. It is apparent that, as a consequence of financing World War II, the functions of the banking system as a supplier of credit were altered; the financing of nongovernmental borrowers became a quantitatively less important function than the financing of government.

We may expect that this situation will be slowly reversed during the postwar period. As the credit needs of peacetime industry expand, the commercial banks may even be forced to sell some of their government securities to make way for commercial loans. Indeed this has already occurred to some extent; loans of all commercial banks were almost $9,000,000,000 higher on June 30, 1948, than at the end of 1946, while holdings of United States government securities had declined by a similar amount.

The large volume of Treasury obligations at present held by the banks, coupled with the possibility that further amounts of government bonds may have to be sold, has given rise to anxiety in some quarters. This anxiety centers upon the future course of interest rates and the problem of banking liquidity. There is no question of the ability of the Treasury to repay its obligations as and when they fall due. The question is rather as to the terms on which a bank can dispose of its holdings of these bonds at some date prior

to their maturity, supposing that it wishes to lend to other customers, or simply to replenish its holdings of cash.

The difficulty can be illustrated by a rough numerical example. Suppose the Treasury sells a $1,000 bond, yielding $30, or 3 per cent, yearly, and repayable in five years. Suppose further that, after the bond is issued, the rate of interest on five-year government bonds rises to 4 per cent. A potential buyer of the bond, since he can get 4 per cent by investing his money elsewhere, will pay only around $950 for it. (The annual yield is then $40, or about 4 per cent, since the bond pays $30 interest, and in addition can be expected to appreciate in value $10 a year on the average.) It is plain therefore that a rise in interest rates will lead to a decline in the value of fixed-interest obligations, such as those issued by the Treasury. Such a fall in the prices of government bonds does not reflect any lessening of confidence in the ability or willingness of the Treasury to repay the obligations at maturity, but is simply a result of a change in the terms upon which new loans are being made in the capital market.

The bearing of this principle upon the liquidity of the banking system is plain. To be liquid, an asset must not only be marketable, but also marketable *without loss*. In the case of the banks, these losses need not be so serious, should rates of interest rise, for they chiefly hold short-term obligations. Bonds which are repayable in the near future vary in price far less than bonds not repayable for many years to come. Yet there can be no doubt but that a sufficient rise in interest rates could render the entire banking system technically insolvent.

The dislike of the banking system for any sharp or sudden rise in interest rates is shared by the Treasury, though for somewhat different reasons. From time to time obligations of the federal government mature, and the Treasury must borrow afresh to meet such maturities. Higher interest rates therefore mean an increase in the cost of carrying the public debt.

What are the prospects of an increase in the cost of borrowing? Ultimately interest rates are settled by the relation between the demands of potential borrowers and the supply of loanable funds. Now that high wartime expenditures are a thing of the past, borrowing will once again chiefly occur to fill the needs of commerce and industry, and also the capital requirements of state and local governments. If the competition of peacetime borrowers should threaten to bid up interest rates, it will still remain possible for the Federal Reserve Banks to prevent such a rise. For it is open to the Reserve System, conscious of the desire both of the commercial banks and of the Treasury for stable interest rates, to place additional funds at

the disposal of the member banks and to encourage them to expand credit even above present levels. Such a policy would however add still further to the inflation of bank credit which has already occurred. Here is a dilemma which has been the subject of much recent discussion, but which at this writing the Federal Reserve System has not yet had seriously to face.

THE RESERVE SYSTEM AND THE LEVEL OF BUSINESS ACTIVITY

We come now to the third and last major problem of banking policy to be discussed here. What responsibility, if any, should the banking system assume for stabilizing the purchasing power of the dollar and the level of business activity in the nation? Since the outbreak of World War II the economic system has been operating in high gear, first in response to the needs of the war effort, and more recently in consequence of the backlog of civilian demand resulting from four years' concentration on military needs. Certainly it was unnecessary during these years for the banks deliberately to stimulate business. The banks were indeed forced, by the needs of the Treasury, to permit credit to expand to a degree which has allowed a substantial decline in the purchasing power of the dollar to occur since Poland was invaded in the fall of 1939. But by and large the banks were mainly concerned during the war with the technical job of marketing the vast volume of government obligations which issued from the Treasury in an apparently unending stream.

The decade of the thirties now seems a distant era, and the problems which then exercised bankers and businessmen have a faraway quality. Nevertheless, one would be foolish to prophesy the continuation of the present sellers' market for goods, or to maintain that the economic system will continue to operate automatically and indefinitely at current high levels. Once the backlog of civilian demand, especially for durable goods such as automobiles and housing, has become somewhat satisfied, unemployment may once again appear. If that should happen, the controversy of the thirties, as to the degree of responsibility of the banking system for the level of business activity, will surely be revived. This controversy turns upon the admittedly close connection between the rate at which the banks are lending and the volume of production and employment. The amount of lending by the commercial banks depends on the one hand upon their reserve position, and on the other upon the number of their customers seeking accommodation. Neither of these factors can be controlled to any appreciable extent by the average commercial bank. We may therefore conclude that the commercial banks are not important policy-makers in

this field, that their function in relation to the volume of credit is essentially to follow a lead set elsewhere. Policy in this matter rests with the Board of Governors of the Reserve System.

It has already been explained that open-market operations allow the Federal Reserve Banks to vary the reserves of the member banks upward or downward within rather wide limits. The Reserve Banks have the power in addition to vary the minimum percentage ratio of cash to deposit liabilities required by law for different classes of member banks. It is with the Reserve Banks, therefore, that discretion rests, and it is they who have responsibility for deciding whether the volume of credit is appropriate, or whether it should be expanded or contracted. In addition to having rather complete control over the reserve position of the commercial banks taken as a whole, the Reserve System can powerfully influence the price of credit. By raising or lowering its rediscount rate it can force changes in the level of short-term interest rates, including the rates at which commercial banks lend to their customers.

After the establishment of the Federal Reserve System in 1913 the existence of these opportunities for the deliberate control of credit was not at first generally recognized. As explained in Chapter 20, the intention of those who drafted the Federal Reserve Act had been that the assets of the Reserve Banks should mainly consist of commercial paper brought by member banks for rediscount. The volume of bills drawn was supposed to fluctuate closely with the activity of business in general. It was therefore hoped that the supply of credit would be responsive to the needs of business, expanding as business activity increased, and contracting with a slackened demand for accommodation. This was the theory of the "elastic currency"; the role envisaged for the Reserve Banks was a purely passive one. But history has a way of falsifying expectations. The end of World War I found the Reserve Banks with large amounts of government obligations among their assets. And business took increasingly to financing its operations by methods other than the commercial bill or bank acceptance.

On the one hand the Reserve System found it progressively more difficult for technical reasons to maintain a purely passive attitude. On the other hand, in the face of marked business fluctuations during the twenties, there came a recognition that discount policy and open-market operations, if properly used, furnished important instruments of control. In fact, especially as increased powers were from time to time conferred upon the Reserve System, many writers were not slow to argue that the Board of Governors should openly assume responsibility for regulating the level of business activity. In periods of speculative enthusiasm—so it was argued—the

Reserve Banks should raise their rediscount rates, so making borrowing by member banks expensive; and should sell securities, so cutting member-bank reserves. Bank credit would contract, spending by business and the public would slow down, and prices would cease to rise. In periods of business recession and falling prices, on the other hand, an opposite policy was urged upon the Reserve System. Rediscount rates should be lowered, and open-market purchases of securities should be made by the Reserve Banks, so that member-bank reserves would be expanded and the lending operations of the commercial banks encouraged. The volume of credit would expand, spending by business and the public would increase, and the decline in commodity prices would be checked. Against this school of thought, the Reserve System, while it never went so far as to deny altogether its power to influence business conditions, has tended to take the position that its primary function is to see to it that industry is supplied with just so much credit as it needs, and that its critics exaggerate its powers of regulating industrial activity.

This question was submitted to a partial—but unfortunately inconclusive—test during the Great Depression of the thirties. Between 1929 and 1932 commodity prices fell sharply, production declined and unemployment rose. During these years the Reserve System lowered its rediscount rates and from time to time purchased fairly substantial quantities of securities in the open market. The effect of these operations upon the volume of bank credit seems to have been negligible. The result of such open-market purchases was to reduce member-bank indebtedness or to increase excess reserves, but not apparently to stimulate member-bank lending. This paradox is explained by reference to the factors mentioned above as determining the amount which a commercial bank will lend. For an expansion of bank credit to occur, two conditions must be fulfilled. First, the commercial banks must be in a comfortable reserve position: this indeed was the case. But in addition the banks must possess a supply of customers anxious to borrow. Otherwise they can make no use of the additional reserves placed at their disposal by the Reserve Banks. In fact, during the depression of the early thirties business was so unprofitable that businessmen had no incentive to make use of additional credit, however cheap and plentiful it might apparently become.

The experience of the years in question, however, cannot be said to have ended the controversy surrounding the duties and responsibilities of the Reserve System. Its critics have argued that, had it taken measures to expand and cheapen credit earlier and on a larger scale, matters might have stood otherwise. Once prices had fallen, and business had become unprofit-

ble, there was little the Reserve Banks could do; but had the Reserve System adopted a bold policy of credit expansion in the spring of 1930, let us say, instead of taking somewhat halfhearted measures as late as 1931 and 1932, the story might have been different. So some critics have argued. Other writers, meanwhile, have concluded from the experience of 1929-32 that there is little the banking system can do to mitigate business depressions, and that the remedy must be sought elsewhere, for instance through large-scale public investment at those times when private business contracts its capital expenditures.

At this point it is not possible to go more deeply into the matter. However, should the period of business prosperity which followed the close of World War II be followed by significant recession, we may be sure that the controversy as to the powers and responsibilities of the Federal Reserve System will be revived.

CHAPTER TWENTY-TWO

How corporations are financed

In Chapter 10 it was pointed out that the corporation is, above all else, a capital-raising device. It also has been pointed out that business enterprises come into existence through commitments of capital. The corporate form of organization enables a group of people to pool their resources in order that they may conduct a common enterprise. Under modern conditions the capital needs of a business concern frequently are greater than can be supplied by single individuals or small groups, making it necessary that the resources of many people be brought together. It has been shown that the corporate form also has facilitated the attainment of less desirable ends, such as the evasion of responsibility and creation of monopoly. Yet, looked at merely as a device for raising capital, there are many desirable, even necessary, functions which the corporate form of organization can perform in the modern system of private enterprise.

FINANCIAL REQUIREMENTS OF CORPORATIONS

Every business concern has needs for capital throughout the period of its existence. Certain of these needs arise in the very inception of the concern; others occur at intervals during its life. In general, it may be said that the financial requirements of an enterprise are of three types: (1) the amount of capital with which it should start; (2) occasional permanent or quasi-permanent changes in capital needs; (3) frequent temporary changes in capital needs. The first two types of financial requirements refer to investment, or long-term, credit. The last requirement usually is met by loans from commercial banks. All of the *requirements* mentioned here apply to business enterprises of other types as well as to corporations. The corporation, however, is a type of business organization which [illegible]

as to the *means* employed in supplying its financial requirements, especially its needs for long-time financing. To make this difference clear, we may well classify the financial requirements of corporations according to their needs for "working capital" and for "fixed capital."

WORKING CAPITAL

That portion of the assets of a corporation which is not tied up in any fixed or permanent form is commonly called the corporation's "working capital." Its principal forms are: (1) cash or deposits in banks; (2) accounts and notes receivable; (3) stocks of finished goods on hand; (4) semifinished goods and raw materials on hand; (5) securities of other corporations (or of governmental bodies) which are held as investments and not for purposes of control. These items of working capital constitute also the "quick assets" of a corporation, in the sense that they consist either of cash or of property which can be converted into cash in a relatively short period of time. It will be observed that all of them, except investments, tend to be liquidated in this manner in the ordinary course of business.

The periods of time for which particular items of working capital are needed vary greatly among different firms and different kinds of business. The amounts of working capital required by some concerns vary considerably at different times. Thus a firm that builds ships or bridges will sometimes have large sums tied up in materials and semifinished products and so will need large amounts of working capital, whereas at other times it will have little work in process and consequently will need only small amounts of working capital. Again a firm that makes wine will be compelled to buy all of the grapes that it uses for an entire year of its business during the months of September and October. During those two months its purchases of raw materials probably call for outlays greater than the income currently received from the sale of finished goods. During the other ten months of the year, the concern continues to sell its stock of finished goods, while it is not purchasing any of this particular raw material. Both of the illustrations given are cases of the "frequent temporary changes in capital needs" referred to in the classification above. In such cases it usually is good business policy to provide for these temporary needs through the use of commercial credit. Typically, this is done by securing a loan from a bank in the manner described in Chapter 20. Since interest must be paid for the use of capital, it is, of course, "good business" to borrow the necessary funds for the shortest possible period of time.

HOW WORKING CAPITAL IS SECURED

There are many firms, however, in which the need for working capital does not vary greatly from time to time. If, for example, a bridge-building concern could so arrange its contracts as to be always about equally busy building bridges, the amount that it would have invested in materials and partly finished bridges would—except for changes in prices—always be about the same. A less hypothetical illustration is a wholesale-grocery firm. Its working capital, consisting principally of stocks of merchandise and of accounts receivable, is likely to vary much less over a period of time than is that of a concern that builds bridges. Even a firm of this kind probably would find it advantageous to have larger inventories at some times than at others and to extend credit to its customers more freely at some times than at others. Changes in the prices of the goods it handled also would cause the value of its inventories to increase at some times and to diminish at others, and would affect in the same manner the amount outstanding as accounts receivable at different times. These occasional and temporary changes in need for working capital could be met most economically through the use of *some* short-term credit, such as commercial credit furnished by banks. But the amount of working capital which is needed permanently in the business should be—in fact, would virtually have to be—provided by investment, or long-term, credit.

The credit terms of both purchase and sale have an important bearing upon working-capital needs. If, for example, a firm buys goods on thirty-day credit and sells them on sixty-day credit, the amount of working capital required will be greater than if it bought on sixty-day and sold on thirty. Some merchandising concerns keep their direct needs for working capital low simply by arranging to get fairly long extensions of credit from the firms from which they buy, and either to sell for cash or to grant only very short extensions of credit to their customers. In such a case the concern is, of course, getting its working capital from the firms from which it buys, and it probably is paying for it either through the loss of discounts for cash or through higher prices for the merchandise it buys. When goods are sold on the "installment plan," the seller usually does not carry the credit extended to customers, but discounts the customers' installment paper with a financial concern (a "finance company" or sometimes a commercial bank) which specializes in financing such transactions. Here again, the firm selling the goods avoids the necessity of having working capital sufficient to extend a large volume of credit to its customers.

FIXED CAPITAL

What constitutes a corporation's "fixed capital" can be inferred from the description which has been given of working capital. It consists of all the assets of a concern that are of a permanent or quasi-permanent nature. The principal forms are: (1) lands and buildings; (2) machinery, fixtures, and other long-lived physical equipment; (3) intangibles of lasting value to the business, such as patent rights, franchises or a preferred standing in the market in which the concern sells or buys (sometimes carried as an asset in the balance sheet of the company under the name, "good will"); (4) securities in other corporations that are held for the purpose of control. It will be observed that none of these assets are "quick assets"; that is, none of them can be converted quickly into cash. The securities of other companies might be so converted but only at the cost of losing control of the companies concerned; if the corporation owning the securities were primarily a holding company, the sale of these assets would amount to its extinction.

Whereas the working-capital needs of a corporation may be met by the use of either short-term credit or long-term credit, its fixed-capital needs always are met by the use of long-term, or investment, credit. It may occasionally happen that a corporation temporarily finances an enlargement of its plant by issuing notes which mature within two or three years, or even by borrowing from a commercial bank. Almost always, however, the corporation will repay such "intermediate" credit at the earliest opportunity. As soon as the rate of interest declines, or the market is otherwise favorable, the corporation will sell an issue of long-term securities and use the proceeds to repay other types of credit; it will do this in every case where the funds in question were used to finance fixed capital.

Some corporations which begin their existence with relatively small amounts of capital "grow from within" by applying their earnings to further capital expansions. The profits earned are "plowed back," or reinvested in the business. The result resembles what would happen if the corporation had paid dividends to its stockholders, and the stockholders had turned around and reinvested these dividends in the business, through the purchase of stock. The Ford Motor Company, all of whose capital is owned by the members of one family, probably is the best-known example of such growing from within. This method of capital accumulation, while possible to any successful corporation, has only in recent years become fairly typical of corporations in general. And even yet the practice does not preclude

the necessity for *new* corporations to secure their capital through selling their securities to investors—frequently to large numbers of investors. The method of growing from within does not provide the amounts of initial capital that are needed by a new concern, and these sometimes are very large. Self-financing becomes more frequent as time goes on and the typical size of business enterprises becomes larger and larger. The more recent tendencies of the "growing from within" method of corporate financing will be considered at a later point in this chapter.

CORPORATE BONDS

All corporate securities fall into two fundamental categories, stocks and bonds.[1] The stockholders are the legal owners of the enterprise, and therefore normally have entire control of management, while the bondholders are creditors of the corporation and have, under ordinary circumstances, no voice in management. Further, being creditors rather than owners, bondholders have no liability with regard to obligations of the concern.

A corporate bond is a written contract by which the issuing corporation promises to pay a specified sum of money at a fixed time in the future (usually more than ten years after the promise to pay is made) and is commonly one of a series of similar bonds, all bearing interest at a fixed rate. Bonds are issued to attract capital from those investors who wish to obtain the greatest possible degree of security and, for that end, are willing to accept a relatively small fixed return on their investment. Since the bondholder is a creditor, he does not buy a share of ownership but merely lends his capital to the corporation, usually for a definite period of years. Twenty years is a fairly common period for the life of a bond. The standard, almost universal type of bond today is the *mortgage* bond. The basic theory of the mortgage bond is that the corporation possesses physical assets of a value in excess of the amount to be borrowed and uses these assets as security for a long-term loan. Suppose a corporation with assets valued at $1,000,000 wishes to issue bonds in the amount of $500,000. It will usually draw up and place in the hands of a trustee a blanket mortgage for the entire amount, against which bonds in denominations of $1,000 or $500 will be issued.

When bonds are issued there are various degrees of security which may be provided to the buyers of the bonds, and of course the kind of

[1] This statement stands, despite the anomalous position of some types of securities (e.g., income bonds) issued during corporate reorganizations. The classification is, of course, primarily a legal one.

security afforded will be of great importance in determining the price at which the bonds can be sold, i.e., the rate of interest which the corporation has to pay during the life of the bonds. Some bonds represent a mere promise to pay, and rest on the general credit of the corporation: these are called *debentures*. Ordinarily, for a given company, a mortgage bond can be sold to yield a lower rate of interest than a debenture, a first mortgage on the property a lower rate than a second mortgage. Due to changes in market rates of interest which occur at different times, it sometimes happens also that a corporation will benefit by retiring certain outstanding bonds with the proceeds of a new issue of bonds bearing a lower rate of interest. Such bonds are known as "refunding bonds." The "refunding operations" which have been carried on by a number of corporations during the past several years have consisted principally in taking up outstanding issues of bonds bearing relatively high rates of interest with the proceeds of new issues bearing relatively low rates of interest.

CORPORATE STOCKS

Practically all of the many varieties of stock found in modern financial practice may be classified as either preferred or common stocks. By preferred stock is meant those types which have prior claims against the earnings, and often against the assets of the business in case of liquidation. By common stock is meant those types which possess the right to all the earnings and assets that remain after all prior claims have been met. Preferred stock may or may not carry the voting privilege, while common stock ordinarily does so. In recent years there has grown up a practice of dividing the common stock into two classes, one of which carries the voting privilege while the other does not. In any case it is usually true today that the control of management is ultimately vested in all, or in some group of, common stockholders. Often, where the preferred stockholders are given the voting privilege, there is also a provision in the bylaws of the corporation that the preferred stock may be retired by a majority vote of the common stockholders. Under such circumstances, the voting privilege of preferred stockholders is similar to the veto power of the King of England—a power only so long as it is not exercised.

The standard type of preferred stock today is limited to a fixed rate of dividends, and is usually "cumulative" as to dividends. Being cumulative means that no dividends may be paid on common stock until all past dividends due on the preferred stock have been paid. Yet since preferred stockholders are owners rather than creditors of the business, they have no right

to take over the control of management, still less to sue the corporation, in the event of nonpayment of dividends. Under such circumstances, the security of the preferred stockholders lies chiefly in the fact that all arrears in dividends due them must be paid in full out of future earnings before any dividends can be declared and paid on the common stock.

The dividend rate on preferred stock normally is somewhat higher than the interest paid to bondholders. This difference in rate of return in favor of holders of preferred stock is made necessary by the fact that bondholders possess claims both to earnings and to assets which have priority over those of preferred stockholders. Consequently, preferred stock appeals to that class of investors desiring a higher rate of return than can be obtained from bonds together with a greater degree of security than applies to common stocks. In passing it may be observed that the common stocks of some corporations are more secure investments than the preferred stocks of others. Yet the preferred stock of a *particular* corporation takes precedence as to earnings—and often also as to assets—over the common stock of that corporation.

THE CAPITAL STRUCTURE OF CORPORATIONS

"Capital" and "capitalization" are words which have different meanings in different contexts. In the context of previous chapters, we have ordinarily meant by capital only tangible assets—machines, buildings, inventories. For our present purpose we may regard the capital of a *business enterprise* as "the net assets of the business which have been secured for continuing use." Even this definition leaves some uncertainties. The term is used sometimes to mean the money value of these net assets, and sometimes to mean the assets (or "capital goods") themselves. For present purposes, also, we may regard the capitalization of a *corporation* as referring to the securities (stocks and bonds) which the corporation issues or has outstanding. The kinds of securities that are issued or are outstanding, and the relative amounts of each of them, constitute the "capital structure" of a corporation.

There are some corporations which have been financed entirely through the issuance of common, or common and preferred, stock. The General Motors Corporation and the International Harvester Company are examples of concerns of large size which have no bonded indebtedness. There are others whose capital has been secured principally through the issuance of bonds. Among these, some of the railroads are especially conspicuous. Both the New York Central and the Pennsylvania companies have a dozen or

more different kinds of mortgage bonds outstanding, aggregating in each case more than seven hundred million dollars.

The success of a corporation is affected greatly by its capital structure. Of recent years a great deal of attention has been directed to the "overcapitalized" condition in numerous concerns. Such "overcapitalization" exists whenever the "fixed charges," for interest to be paid on bonds, and dividends to be paid on preferred stock, exceed the earnings normally available for meeting such charges. When such conditions exist, especially with reference to interest on bonded indebtedness, the only method by which the capitalization can be reduced is through the painful process of bankruptcy and the sale of assets, or the reorganization of the company in the interests of its creditors.

Since common stock represents the equity or basic ownership, it follows, of course, that every corporation must have common stock outstanding, whereas only those corporations which choose to do so have preferred stock or bonds outstanding. Whether a corporation will issue bonds or not depends on several considerations. Leaving out of account the special interests of "control groups," the most important consideration is whether the stockholders of the corporation will receive larger earnings for themselves after paying the interest on a bonded debt than they would receive if dividends had to be paid on a larger quantity of stock. Another consideration is the relative marketability of stocks and bonds. Thus a corporation which has no bonded debt, whose earnings at present are low and whose common stock is consequently low in market value, may find that it will have no difficulty in selling an issue of bonds but that it could not add to the amount of its stock outstanding without causing a still further decline in the market value of its shares. If it is reasonably certain that the proceeds of the bonds will enable the corporation to increase its earnings by more than enough to meet interest and sinking-fund charges, it would be the part of good business judgment to issue bonds instead of increasing the amount of stock outstanding.

RIGHTS AND POWERS OF CORPORATE-SECURITY HOLDERS

Stockholders. As stated above the stockholders are the legal owners of a corporation and, as such, possess ultimate control of management. This control is lost only when the business is unable to meet the claims of creditors and consequently is foreclosed and expropriated for the benefit of the latter. In the control of management it is an almost universal rule that each share of stock has one vote, and that a bare majority of stock, or votes,

holds the power of making all corporate decisions. The chief exception to this rule is found in certain co-operative associations which achieve democracy of management by limiting each stockholder to a single vote regardless of the number of shares of stock that he may own. There also are corporations, as was pointed out, in which only a designated type of common stock carries the voting privilege.

It usually has been the custom in the past to issue common stock with a nominal par value, but at present there is a growing practice of issuing common stock with no par value. It has been argued that the latter practice is much to be preferred, since the former often tends to create a fictitious value for the stock in the eyes of the investor. Since, in the event of failure of the business, there are rarely any assets left to be divided among common-stockholders, the market value of common stock depends almost entirely upon the past and prospective earning record of the corporation. There is no necessary relationship, therefore, between a nominal par value and the existing market value of a common stock. Such a relationship exists, it is true, when the common stock represents an actual capital investment, but even then it exists only at the moment of investment. As soon as the investment has been made, the two values part company, and if they coincide again later, it is entirely a matter of accident.

Bondholders. The chief protection of bondholders lies in the priority of their claims against both the earnings and the assets of the corporation. Before any dividends can be paid to stockholders, interest must be paid in full to bondholders. Also, in the event of liquidation, the claims of the bondholders must be paid in full before there can be any division of assets among the stockholders. As long as interest is paid regularly, the bondholders have no voice whatsoever in the management of the concern. When interest is not paid, they may then either sell the assets of the corporation to satisfy their claims, or reorganize the company under a new management. Bonds are usually classified as first, second, or third mortgage bonds in accordance with the priority of their claims against the assets and earnings of the corporation.

Although the creditorship status of the bondholder and the ownership status of the stockholder make for a sharp differentiation between the two in legal theory, this distinction tends to become blurred in actual practice. The chief practical difference is merely one of priority of claims against earnings. As we have seen, the bondholders have theoretically a complete protection against loss by holding a mortgage on assets of a value considerably greater than the total amount of the bond issue. But the assets will have a higher value if the company owning them is making a profit than

will be the case if it is not making a profit. Fixed assets, such as factory buildings and specialized machinery, are difficult to transform to other uses and in case of failure may shrink in value to only a small fraction of their original cost. Their value as long as they are embodied in a going concern greatly exceeds their value as junk.

The bondholders, therefore, may discover that the value of the property pledged to secure their bonds is far from adequate to cover their claims. Under such circumstances they often will suffer less loss if they do not exercise their right of foreclosure but merely wait and hope for better times. Even when they do foreclose and take over the property, they are much more likely to reorganize the business under a new management than to attempt to realize on the assets. Thus the greater security of bondholders lies not so much in the fact that they hold a mortgage on the property as it does in the fact that their claims to earnings must be fully satisfied before anything can be paid to stockholders. In this sense the difference between bonds and preferred stock is practically the same as the difference between preferred and common stock. It is essentially a matter of priority of claim to whatever earnings are made.

SELF-FINANCING BY CORPORATIONS

It was pointed out above that some corporations accumulate capital by "growing from within," that is, by applying their own earnings to further capital expansion. Clearly such a method of acquiring capital cannot provide the funds needed by *new* concerns, and there often are almost equally obvious situations in which the need of an established concern for large amounts of additional capital cannot be met out of accumulated earnings, and in which recourse must be had to issuing and selling stocks or bonds of the corporation. Yet the accumulation of capital by "growing from within" appears to be gaining favor and to be practiced more and more by well-established corporations. That is to say, an expanding business will tend to distribute only part of its profits, and to "plow back" the remainder for capital expenditures. The process will become clearer if we examine briefly the ways in which the "growing from within" actually occurs.

Undistributed profits. Many concerns have adopted the practice of paying out in dividends to stockholders sums consistently smaller than the full amount of the profits they make. The balance, retained by the corporation, is used for capital expansion. For example, Table 19 shows the sources from which capital was secured and the uses to which it was put by the United States Steel Corporation during the years 1921-38. Here we see that

Table 19 **UNITED STATES STEEL CORPORATION AND SUBSIDIARIES: SOURCES AND DISPOSITION OF FUNDS**

(1921-1938, inclusive)

SOURCES	
Profits retained	$ 192 million
Net tax refunds	50
Allowances for depreciation, depletion, etc.	938
Net reduction of working capital during period	186
Common stock issued	240
Total	**1,606**
DISPOSITION	
Gross expenditures for plant and equipment	1,222
Property acquired for common stock	51
Net funded debt retired	333
Total	**1,606**

one of the sources of capital funds consisted of "profits retained," amounting to $192,000,000. (During the period covered by the statement, this company earned $1,102,000,000 altogether in profits and paid dividends of $910,000,000 to its stockholders. The excess of profits over dividend payments created the $192,000,000 of "profits retained.")

Depreciation and depletion. The largest source by far of capital funds disclosed in Table 19 consisted of "allowances for depreciation, depletion, etc." ($938,000,000). Plant and equipment, in the course of time, wear out. It is a part of conservative business practice to regard this wearing out as one of the costs of doing business during each accounting period. For each such period—ordinarily a year—an estimate is made of the amount by which the various items of plant and equipment have depreciated, and a corresponding amount of the gross revenue of the corporation is appropriated to a reserve account. This is done so that the concern in question will be able to replace each item, when it wears out, using for the purpose reserve funds secured from past operating revenues.

If such reserves were accumulated with complete exactness, the amount of reserve available to replace a particular item of plant or equipment would, on the precise day when the item was no longer usable and had to be retired, equal the exact amount of money originally invested in that item. Such exactness is, of course, impossible, and so there is a strong probability of error in estimating depreciation. Conservative business policy tends, on the whole, to overdepreciate rather than to underdepreciate. For this reason

the depreciation reserves (and depletion reserves kept against exhaustion of such kinds of property as coal and iron ore deposits) of a well-managed concern tend to exceed the actual depreciation (or depletion) that occurs. That is, at any given time the reserves tend to be greater than the value that has been lost by depreciation or depletion.

In the case of the United States Steel Corporation, as we have just seen, the greater part of the expenditures for plant and equipment over an eighteen-year period were financed from depreciation and depletion allowances. We can assume that the accounting practices of the corporation were conservative. Consequently, replacement of worn-out capital equipment probably cost somewhat less than $938,000,000, and the expenditures for additional plant and equipment (i.e., for expansion) somewhat exceeded $284,000,000. (Total expenditures, it will be recalled, were $1,222,000,000.)

The remaining entries in Table 19 require but brief explanation. Some funds were derived from return of prior overpayments of taxes, and reduction of working capital (i.e., inventories). In addition $240,000,000 of common stock was issued. However, since $51,000,000 of the new stock was issued for property rather than for cash, and since $333,000,000 of debt was repaid, the corporation on balance returned more capital funds to the public than it raised from the public over the period to which the statement applies.

In testimony before the Temporary National Economic Committee, officials of the General Electric Company and the General Motors Corporation made statements showing that their corporations also had, over a long period of time, secured very large proportions of the capital they required from retained profits or from reserves for depreciation. Even a relatively new and rapidly expanding company, the United Aircraft Corporation, while the proportion of its capital secured from this source was lower than that of the older concerns, showed the same trend.

THE SIGNIFICANCE OF SELF-FINANCING

When a firm can finance all, or nearly all, of its needs for capital out of its own resources, does it not mean that the firm has reached the peak of its growth and is no longer expanding? The experience of the companies mentioned above indicates that, in their cases, it does not have such a meaning. Every one of these companies made a substantial increase in its productive capacity during the period covered by the United States Steel Corporation's figures. That is, the new investments of capital made during this period

amounted to substantially more than a *replacement* of productive equipment that had been worn out.

The significance of such self-financing is not that corporations failed to keep up-to-date or to expand their facilities, but that they were able to satisfy their needs for capital without appealing to outside sources of finance. It has been estimated that in recent decades between one-half and three-quarters of the capital expenditures (new and replacement) of the economy were met through self-financing.[1] This situation has had two important results. So far as short-term financing is concerned, the commercial banks have (as we saw in Chapter 21) tended to lend less to business and more to government. And the lessened need of business for new long-term capital from outside has led to a redirection of the capital market, on the one hand toward the refinancing of existing corporate issues, and on the other toward meeting the increasing demands of government (state and local, as well as federal) for long-term funds.

THE CAPITAL MARKET

Despite the tendency for many large enterprises to finance their expansion out of profits, substantial amounts of capital are still obtained by business through the sale of corporate stocks and bonds, or through loans from financial institutions. Sometimes such institutions furnish businesses directly with capital funds; sometimes they facilitate the marketing of corporate obligations among members of the general public.

Money savings are accumulated by individuals for the most part in small amounts, while corporations and governmental units who wish to use these savings for financing their capital needs are few as compared to the number of savers. Some arrangement is necessary to bring the numerous savers and the capital users together. The meeting place of these two groups is called the "capital market."

The capital market includes, on the one hand, commercial banks for the provision of short-term credit, savings banks and insurance companies for the provision of medium and long-term credit, and investment banks for the distribution of stocks and bonds. The operations of the commercial banker have already been described in the preceding chapters of this section. After a brief discussion of savings banks and insurance companies, the remainder of this chapter will be concerned with investment banking.

[1] George Terborgh, *The Bogey of Economic Maturity*, Machinery and Allied Products Institute, Chicago, 1945, p. 146.

Savings banks. Savings banks afford a very straightforward example of the process under discussion. Their business is to collect small savings from numerous depositors. The resulting funds are invested in many different securities—in real-estate mortgages, federal and local government bonds, and corporate securities. Savings and loan associations, or building and loan associations, have similar functions but tend to specialize in the provision of capital for residential construction through real-estate mortgages. The postal savings system also collects small savings from numerous depositors: the user of its funds is of course the United States Treasury.

Of course commercial banks, discussed in preceding chapters, also collect small savings and supply capital, especially on a short-term basis. However, it will be recalled that—subject to definite limitations—the commercial banks can create or destroy purchasing power through their lending operations. They can do this because for them "loans create deposits," and their deposits are for the most part checking accounts against which their customers can draw. One function of commercial banks is to collect small savings; but a still more important function is that of providing the public with a circulating medium.

Savings banks and similar institutions must therefore be distinguished sharply from commercial banks. Deposits in savings banks cannot be checked against. Moreover, savings-bank depositors can be compelled to give notice before withdrawal, although this provision often is not enforced. That is to say, savings banks furnish their customers with a repository for savings, rather than a cash balance for day-to-day use. Their functions are more restricted than those of commercial banks, and they can afford to be less liquid than the latter.

Insurance companies. When you pay a life insurance premium, the company uses most of it to build up a reserve against the increasing possibility of your death as you grow older. Some of the premium you pay now is to insure you in case you die right away; but most of it goes to insure you in the distant future, when your death will become much more probable. Only by accumulating on your behalf a reserve in this manner can the company avoid charging you sharply rising premiums as you grow older.

By accumulating reserves in their behalf, a life insurance company enables its insured to save; the savings are returned to the insured when they surrender their policies, when they reach a specified age, or when they die. Thus life insurance companies, and to a lesser extent companies extending other forms of insurance, collect small savings regularly—in the form of premiums—and have them available for investment. Accordingly they lend on mortgage and may even own real estate; in addition they are buyers of

government and corporate securities. Just as savings banks can afford to be less liquid than commercial banks, so life insurance companies may be still less liquid, for they have an even better idea—thanks to the law of averages—of the future time schedule of their liabilities.

Investment banks. Unlike commercial banks, savings banks and insurance companies, investment banks do not have extensive liabilities to numerous customers; nor do they buy large blocks of securities or other assets to hold permanently. Their function is strictly to act as middlemen. In this capacity they channel savings from individuals, or from savings banks and insurance companies, to corporations or governmental units in need of funds. Three parties are concerned in a typical transaction—the individuals or associations making the loan, the investment banker as the intermediary, and the borrower, most likely a corporation. In general, the transaction consists of the sale by the borrowing corporation of an issue of bonds (or stocks) to an investment banker who in turn will resell these same bonds (or stocks) directly to the investing public. The end result is to place the borrowing corporation in possession of the desired funds, while the investors receive certain claims on its earnings. An important point to note in this connection is that when *new* securities are thus issued and sold by a borrowing business concern, the money flows from the purchasers of the securities through the investment banker to the treasury of the borrower. This stands in contrast to the purchase and sale of *old* securities, i.e., of securities which already are outstanding. In the latter situation, the money flows from the buyer to the seller of the security (who may have owned the security for some time) and does not affect the volume of funds available to the original issuer of the securities. The market for old securities will be described in Chapter 23.

HOW INVESTMENT BANKERS OPERATE

The nature of the function performed by investment-banking firms in connection with the issuance of new securities will be better understood if we trace the history of a hypothetical transaction. Many details will vary according to customs of particular investment-banking firms, the size of the transaction, and the character of the securities issued, yet the following procedures may be considered typical. Suppose that the Torpedo Automobile Corporation has been profitably manufacturing high-grade cars on a small scale, and that it wishes to enter the mass market with a low-priced Torpedo. A large expansion of plant facilities is necessary. Some of this investment, let us suppose, can be financed out of past earnings. Yet the cost of

the proposed expansion is sufficiently great to require "outside financing." The Torpedo Automobile Corporation therefore approaches White Brothers in New York, a long-established investment-banking firm accustomed to handling new issues of corporate securities.

The discussions which ensue between White Brothers and the corporation take the form chiefly of an exchange of information. On the one hand White Brothers will wish to sponsor the issue only if they think the securities of the corporation can be successfully sold to investors. They will therefore make a study of the corporation's position in the industry, of its prospects for obtaining public acceptance for the projected low-priced car, of its past earnings and current financial position, and of its engineering standards and potential production capacity. In return White Brothers are able to give the Torpedo management an account of the current state of the security markets, and of the terms on which the corporation could probably sell a new issue of stocks or bonds of a given size. It develops that most of the existing common stock of the corporation is held by its officials who do not wish to lose control through the issuance of additional common stock. On the other hand White Brothers report that the risks involved in entrance into the market for low-priced cars, coupled with the large commitment involved, make the prospects for a bond issue poor unless a rather high rate of interest is offered. It is thought, however, that the public would be willing to subscribe to an issue of preferred stock. To protect themselves against offers by competing investment bankers, White Brothers purchase from the Torpedo Automobile Corporation an "option" on the prospective issue of securities—that is, the right for a specified period to buy any such securities issued by the corporation.

INVESTIGATION AND REGISTRATION OF NEW ISSUES

White Brothers now go to work in earnest. As sponsors of the issue they have a moral obligation to their customers to see that all relevant facts about the Torpedo Corporation and its management are disclosed. Even more important, perhaps, since the passage of the Securities Act of 1933 they are held legally responsible for the accuracy and completeness of the statements appearing in the "prospectus" or offer of the securities for sale. Therefore White Brothers proceed to investigate the affairs of the Torpedo Corporation in even greater detail. Such matters as the corporation's management personnel, its relations with its working people, the character of its products and the competition it is likely to encounter in the new field, will all be studied. Independent experts are called in from engineering firms

to report on the physical condition of the property, and the probable development of future competitive products. Outside auditing firms report on the corporation's operating figures, current status, and accounting methods. Appraisers place a value on the physical property and on the corporation as a going business. Legal counsel is employed to investigate such matters as whether the corporation is lawfully organized with a proper charter, whether it has the franchise or other rights necessary to carry on its business, and whether it has clear title to its various properties.

This investigation is of great importance because investors, having regard for the reputation of the investment-banking firm, place reliance on its report. Unfortunately, prior to the establishment of the Securities and Exchange Commission by the Securities Exchange Act of 1934, this investigation was at times perfunctory. Today the investment-banking house and the issuing corporation collaborate in the compilation of a lengthy *registration statement* to be filed with the commission. In addition, information as to the syndicate or underwriting contract (to be described shortly) must be filed before the registration statement can become effective, and the public offering be made. Particularly, data are required which disclose the "spread" received by the investment banker, i.e., the difference in price to be paid by the public for the new stock and the price to be received by the Torpedo Corporation.

If the commission finds a registration statement to be inaccurate or incomplete, it issues a stop order suspending its effectiveness. After a hearing, or if the registration statement is amended to conform to the requirements of the commission, the stop order may be removed and the effective date of registration restored. Although the commission cannot investigate every statement in detail, and must usually act upon obvious deficiencies or complaints, the power to prevent the issue from being made probably has stimulated full disclosure.

THE MARKETING OF NEW ISSUES

Of course if White Brothers could immediately sell to their customers, individuals and institutions, the whole of the preferred stock to be issued at a price slightly higher than that paid to the Torpedo Corporation, the matter would be simple. Under such conditions the spread would compensate them for their trouble, and they would bear no special risk. But the business of distributing a new issue of securities is much more complicated. In actual fact, there is always the possibility that White Brothers have misjudged the market, or that market conditions have suddenly changed prior to the of-

fering. In that case they would possibly be left with most of the issue on their hands. But White Brothers do not have the capital to hold the issue themselves for any length of time; they think of themselves as a merchandising firm, and they must clearly avoid any risk of tying up their own capital in such a fashion. Therefore, they arrange a *purchase syndicate*, composed of other investment-banking firms, to take over some of the risk of distribution. Each member of the syndicate agrees to take a specified amount of stock at a specified price. A typical arrangement would be for the new issue of Torpedo Preferred, paying $5.00 yearly, to be sold by the Torpedo Corporation to White Brothers for $96 and by the latter to syndicate members for $97 with a view to public offering at par, $100 a share.

As an alternative the stock may be offered for public subscription, in which case White Brothers organize an *underwriting syndicate* whose members agree to accept any unsold stock in return for a specified discount. In the light of uncertain market conditions, these devices insure (1) that the corporation will get the whole of the sum needed for expansion, and (2) that the risk of any one investment firm's being left with inconveniently large amounts of unsold stock is eliminated.

There remains the task of disposing of the issue once it reaches the hands of the members of the purchase syndicate, or (in the case of a public subscription) of the balance of the issue remaining in the hands of the underwriters. A large part will be placed with individual clients of the various participating investment houses. Another part—especially in the case of a high-grade bond issue—may be sold to large institutional buyers, such as insurance companies, savings banks, or investment trusts.

In the case of a very large issue more elaborate arrangements may be made. Borrowings by states and by the largest industrial corporations sometimes total more than $100,000,000 of bonds in a single issue. In the course of time, investment-banking houses in the principal capital markets have established relations with smaller firms throughout the nation. From past experience, members of the syndicate know about how much of various types of securities each of these firms can be expected to place with investors. Members of the syndicate invite a selected list of such houses to participate in a *selling group*. This group usually assumes no underwriting liability, restricting itself entirely to distribution. Each member of the selling group may agree to purchase for resale a stated number of securities, with the stipulation that unsold allotments may be returned to the syndicate. In some instances the liability of the selling group is even less, the members merely agreeing to take securities from the purchase syndicates

upon receipt of orders from their customers. Since these smaller security houses have little or no originating power of their own, a regular place on the selling-group lists of large originating houses is often their most valuable asset. This means that they are under pressure to accept invitations to participate in selling groups whether or not the particular issue is to their liking. The leading originating houses feel that this is necessary if they are to build an effective and permanent security-distributing organization.

The process of making the public offering is called "opening the books." Prior to opening the books and shortly before the end of the twenty-day "cooling" period for the registration statement, "red-herring" prospectuses summarizing the full description of the issue will be sent to each of the members of the selling groups. The term red herring arises from the fact that across the face of these preliminary prospectuses is stamped in red ink a legend to the effect that the document does not constitute an offer to sell, and that such offers should be made only on the basis of the authorized prospectus after the effective date of the registration statement. When the registration statement becomes effective, complete prospectuses and selling-group contracts are sent out. Newspaper advertisements and stories will have been made available to selected papers for publication on the offering date. With these arrangements made, a formidable array of bond salesmen will be ready to discuss the issue on the day of the public offering with prospective buyers in many parts of the nation.

ABUSES ATTENDING INVESTMENT BANKING

Certain phases of investment banking have lent themselves to abuses and have been much criticized. Some of the worst of these have disappeared as a result of the provisions of the Securities Exchange Act of 1934.

Disclosure of information. We noted above that, before sponsoring an issue, the investment-banking firm is likely to make an elaborate investigation of financial and other aspects of the issuing corporation. Moreover, we cannot doubt that a reputation for sponsoring successful issues is one of the most valuable assets an individual banker can have. One might conclude that this would provide ample protection to the investor. Such, however, is not the case. Even though a full disclosure is made, the investor may not be sufficiently expert to interpret the conditions described in a prospectus. The value of a bond or a stock is a matter of opinion at best, with its future value more dependent upon business developments than upon present values or past records.

The most respectable of firms have at times let their desire for immediate profit jeopardize reputations that have required years to build.[1] The policy of investment bankers has sometimes been dominated by their knowledge that the methods used by syndicates permit rapid and effective selling, regardless of the quality of issues. The prospectus, which is the basic document of disclosure, has sometimes been prepared more with a view to sales appeal than as a statement of conditions and facts on which to judge the value of the issue. There have been many material omissions and outright misstatements, although much has been done to cure this deficiency of investment banking through the requirement of elaborate registration statements. These are filed with the Securities and Exchange Commission and are available for public inspection. It must be pointed out, however, that the investor is mistaken if he thinks the government will or can protect him from the purchase of unprofitable investments. The successful application of the principle, "the truth, the whole truth, and nothing but the truth," to the description of securities will eliminate those losses that result from what might be described as fraud. But difficulty arises in determining the truth where values must be estimated, and business prospects cannot but be guesswork.

The investment banker's "spread." Another phase of the investment-banking business that has been much discussed in recent years is the matter of the spread between the price paid to issuing corporations and the price at which securities are sold to investors. This spread may range from 2 per cent to 4 per cent of the par value of bonds, perhaps from 3 per cent to 5 per cent of the public offering price of preferred stocks and something over 5 per cent in the case of common stocks.[2] Included in this spread are the necessary expenses incurred by the bankers in new security financing and the profits of investment-banking firms. Theoretically, competition is supposed to regulate the compensation for risk in the form of profits, but there is reason to believe that competition alone cannot entirely control the situation. The price paid to the issuing corporation by the purchasing syndicate is generally determined after a tentative figure has been set for the public offering. It is at this stage of the proceedings that the banking profit is approximately fixed. Competition is unable to assert itself, since the man-

[1] See B. J. Reis, *False Security*, Equinox, New York, 1937, for a documented, if vituperative, treatment of this subject.

[2] There has been a tendency for these spreads to decrease in recent years. In the case of prime quality refunding bonds a number of instances have occurred in which the spread was less than 2 per cent.

ager of the purchasing group probably has an option on the business by right of contract or by right of a long-standing relationship with the issuer.

There are two ways of getting at this matter. The public can be informed of the exact amount of the spread in the prospectus and other material describing the offering, as required by the Securities and Exchange Commission. If the spread to the bankers appears to be too liberal, investors will be less willing to purchase the security. Another way of controlling the spread is through competitive bidding for the issue by different groups of investment bankers. Competitive bidding should force the bankers to pay a price closer to that at which the issue is publicly offered. This has long been the general practice in the case of offerings of municipal bonds and United States Treasury bills (though not bonds).

The SEC has made great efforts to have the practice of competitive bidding extended to the field of corporate bonds in general. The obstacles to such an extension seem to be as follows. If the corporation is neither very large nor very well known, no firm or syndicate will wish to bid for (or underwrite) an issue unless it has undertaken a thoroughgoing inquiry into the corporation's activities; yet an investment-banking firm will not care to make such an inquiry, with its attendant expense, for the mere privilege of entering one of many bids for the issue. Indeed it was precisely to cover the costs of such an inquiry that White Brothers, in our example, secured an option on any issue to be made by the Torpedo Automobile Corporation. On the other hand, if the issuing corporation is so large and well known that elaborate investigation is unnecessary, a different obstacle is encountered. For the issue may itself turn out to be so large that the entire investment-banking fraternity cannot muster more than a single syndicate to handle its distribution. The scope for competitive bidding in this field therefore appears to be confined to the handling of small or moderate-sized issues by very well-known corporations.

Finance capitalism. The close relationship that has long existed between investment-banking houses and particular corporations suggests another of the phases of investment banking that has been widely criticized. It has been maintained that the relationship extends beyond the limits of the financial requirements of the corporation to its ultimate control by the investment bank, a condition popularly described as "finance capitalism" (an important aspect of the "era of finance capital" described in Chapter 6). This is made possible through influencing the designation of directors or officers whose ostensible purpose, at least in part, is to watch over the financial interest of investors who have bought issues from the banking house. It is well known that the generality of stockholders are substantially disfranchised by the

proxy machinery, and that directors and officers control large corporations in fact. It is impossible to measure how much control over the business life of the nation is thus exercised by investment bankers through their representatives in corporations. That there is much would be difficult to deny. Those who sponsor competitive bidding for corporate securities undoubtedly hope that it might reverse, or at least check, this tendency towards concentration of economic control.

CHAPTER TWENTY-THREE

The security markets

TWO TYPES OF SECURITY MARKETS

There are two broad types of security markets. One, the *new-issues market,* was described in the preceding chapter. Its distinguishing characteristic is that it provides a direct means of making the savings of the community available to business enterprises. When a corporation issues and sells new securities the corporation itself receives the major part of the proceeds. But there is nothing to prevent the original buyer of the newly issued security from reselling, nor is there any reason why some other person should not buy a stock or bond from the original purchaser. In fact, the knowledge that he can subsequently sell the security, if he wishes to do so, is one of the factors that enters into the calculations of the original purchaser when he buys the bond or stock.

If securities are to be resold and purchased after their issuance by corporations, markets must be available for this purpose. The market for "*old*" *issues* is the second of the broad types of security markets. A market for anything exists wherever buyers and sellers of a particular thing meet and make transactions. Markets may be spread out over wide areas, or they may be concentrated in one or several locations. The new-issues market, like the automobile market, is found in all those parts of the country where the possession of purchasing power provides potential buyers. The market for old issues, like the markets for cotton and wheat, has tended to concentrate where the greatest number of buyers and sellers, or their agents, can meet.

In each of our larger cities, and especially in New York, the market for old, or existing, issues takes two forms. On the one hand are the *organized stock exchanges* (although the term "stock exchange" is a misnomer, since

bonds as well as stocks are traded on these markets) of which the New York Stock Exchange is the largest and best example. On the other hand are the so-called *over-the-counter markets* which are not as highly organized as the stock exchanges. Both stocks and bonds are traded in over-the-counter markets, but trading in bonds is much the more important. Most investment-banking firms of the merchandising type have among their facilities what is called "the trading desk" for security dealers. It is much more than a desk. It may comprise one or several long tables with telephone switchboards connected by private wires to the trading desks of other firms. There are said to be, in all, some 6,800 brokers and dealers who are linked together by private telephone and telegraph lines.

WHAT THE SECURITY MARKETS DO

The functions of securities markets usually are described as three: first, the supplying of business with needed capital funds; second, the allocation of these funds to the most appropriate uses; and third, the provision of what is called liquidity to the ownership of corporate stocks and bonds. The nature of these functions will be made clear if we examine their relation to the security markets for both new and old issues.

In the preceding chapter it was seen how the business of investment banking provides a channel through which a significant part of the community's savings finds its way to new business investment. It was also seen that the decisions of investment bankers as to what kinds of securities they will sell, and how much they will sell, help determine the direction and the amount of the flow of savings to investment.

Thus it may be said that of the three functions ascribed to security markets the first two are directly related to the new-issues market. Only the third, the provision of liquidity, is directly related to the organized markets for old issues. It has been said by authors in the past that it is a function of organized stock exchanges to furnish business with new capital. This is an overstatement. A more correct interpretation would be that they facilitate or influence the acquisition of new capital by business, but they do not directly furnish such capital. Money flows through the new-issues market from investors to corporations, but in the markets for old issues money flows from one investor to another. There are, however, several ways in which the markets for old issues facilitate or influence the flow of savings to new investment. Three of these ways are of sufficient significance to be included in this brief discussion.

1. *Direct provision of liquidity to investments.* It is not easy for an individual to forecast future developments that will bear on the soundness or value of an investment he makes today. He will attempt to make as careful a judgment as possible but, even though he may be satisfied with the prospects, he cannot be sure. Accordingly, he wants a way to escape from his commitment if he should change his opinion about the future. Without this means of escape, i.e., the opportunity to sell the security at any time he wishes, he would be less willing to make the original investment. The organized markets for old issues provide the opportunity for quick sale of securities when, and if, the present holders wish to dispose of them. This provides securities with the quality called *liquidity*.

2. *Measurement of industrial needs for capital.* The provision of liquidity does not necessarily mean the provision of stability of prices of securities through time. For the most part, people buy securities in the expectation of receiving interest payments or dividends. The certainty of receiving fixed interest payments, and the expectation of receiving higher or lower dividends, enter into the determination of the present selling prices of bonds and stocks. It follows that, as corporation profits and the expectation of corporation profits increase and decrease, the prices of bonds and shares on organized markets will rise and fall accordingly. Now, the profits of an individual corporation are presumed to reflect its effectiveness in satisfying its customers' demands. (This is not, of course, universally the case, as we know from the prevalence of monopoly situations. Yet the correspondence between profitability and social usefulness remains a basic assumption, at least in the United States.)

Let us suppose that plastics are coming more and more into use as a basic material, but that the market for coal is contracting on account of the development of substitute sources of power. It is plainly appropriate that new capital funds should be directed to the plastics industry rather than to the coal industry. Under the conditions outlined it is easy to see that the business of making plastics will be relatively profitable, and that of mining coal relatively unprofitable. The securities of corporations engaged in the manufacture of plastics will tend to rise, and those of corporations engaged in mining coal will tend to decline, in value. This will make it easier for investment-banking firms to market new issues of plastics companies, and more difficult or impossible to sell new issues of coal-mining companies.

3. *Forecasting of business trends.* In addition to the movements of prices of old securities with reference to one another, prices sometimes move with sufficient uniformity to describe a general trend. "The market was strong (or weak) today" is a familiar line to all who read the financial page

of a daily newspaper. It has long been felt that such a general movement of prices of old securities is a reasonably good forecast of the future trend of business activity, on the assumption that prices in organized security markets represent the opinion of thousands of individuals in all walks of life. If it is the consensus of this opinion that the outlook for business is favorable, buying orders will increase relatively to selling orders and prices will rise. If, on the other hand, it is held that business is going to be less active, with profits correspondingly lower, selling orders will increase relatively to buying orders and prices will decline.

SIGNIFICANCE OF SECURITY-PRICE CHANGES

Like so many rule-of-thumb devices for forecasting the future, the movements of prices on organized security markets are not always reliable. The situation in 1929 furnishes a spectacular illustration of the failure of stock-market prices to act as reliable indicators of future business activity. Although the prices of securities continued to advance until mid-September, many of our important indexes of business activity had begun to decline by July or earlier. The reliability of security prices as a business forecaster depends upon the ability of those who are interested in securities to guess the trend of business for some future period, an uncertain process at best. But the data suggest that prices on organized markets are more often right than wrong in forecasting business activity. The relationship involved is a complicated one, since a substantial rise or decline—even if due principally to current speculative forces—in the market prices of old securities can have marked effects on the immediate future of business activity. Yet price movements of old securities can and do exert considerable influence on the flow of savings to new investment.

Because trading in old securities influences the flow of savings to new investment in these several ways, it constitutes a significant phase of the nation's economic life. To understand its essential nature a full description of this trading in all of its aspects is not necessary. The operation of the New York Stock Exchange is representative. A brief description of this institution and its affiliated firms, together with a discussion of certain trading practices, will suffice.

THE ORGANIZATION OF THE NEW YORK STOCK EXCHANGE

Many changes have taken place in the nation's largest organized security market since 1792, when a group of brokers gathered under a but-

tonwood tree to transact their business. In the early days of the Exchange it was the practice of the members to sit before a "caller" who called up stocks for trading, one at a time. When transactions were completed in one issue, the caller would pass on to the next. As the Exchange is now organized, trading is continuous in all listed securities during the entire time that the Exchange is open for business. The term "seat" is still applied to the privilege of trading on the floor of the Exchange, although in busy markets the members seldom have an opportunity to get off their feet.

The number of Exchange members is fixed at 1,375. To gain admission a person must purchase the right to trade on the Exchange from some member who is willing to dispose of his right. So far as the management of its internal affairs are concerned, the Exchange is more in the nature of a private club than a public corporation. The reputation of the prospective new member must be acceptable to an admissions committee before he may use the facilities of the Exchange, and applicants for admission are rigorously investigated.

During the nineteenth century the greater part of the trading on the Exchange was in government and railroad securities. As increasing segments of the nation's business came to be incorporated, more and more securities were listed for trading. The same thing has taken place to a lesser extent on smaller exchanges throughout the country. The issues no longer are limited to government and railroad securities. Today practically every kind of enterprise is represented, from mining to aviation and from steel to groceries.

THE COMMISSION-FIRM SYSTEM

Let us suppose that a certain Mr. Smith wishes to buy 100 shares of United States Steel Corporation common stock, which has been selling in the recent past for, say $60 a share or thereabouts. He goes to the office of a commission firm or broker, one of whose partners is a member of the New York Stock Exchange. His order is telephoned from that office to the firm's telephone clerk on the floor of the exchange and the clerk passes the order to the partner who is a member of the exchange. Now it is necessary to consider the kind of order Mr. Smith has given.

Orders to buy and sell securities on organized markets are of a number of different kinds. They may be "market orders" which instruct the broker to execute the orders at the best price possible but to execute them regardless of the specific price. They may be "limited orders" which direct the broker not to buy at more than a certain price or not to sell for less than a certain price. The broker is expected to do better if possible, but if the

limits are too low or too high it may be impossible to execute the orders. Orders may be entered for more than one day in which case they are called "open orders."

Suppose that, when Mr. Smith enters his order for 100 shares of United States Steel, he does not wish to risk paying an uncertain price, and does not wish to buy the shares unless he can purchase them at or below a specific price. In these circumstances he will enter a limited order, say to buy 100 Steel at 60. When the broker receives the order on the floor of the stock exchange he takes it to what is called the "trading post" for the stock of United States Steel. Each stock and bond listed for trading is assigned to one of these posts, at which may be found one or more men who specialize in the issues assigned to a particular post.

THE FUNCTIONS OF SPECIALISTS

These so-called specialists constitute an important part of the organization of security markets. As dealers, they buy and sell stocks for their own account, and as agents, they buy and sell stocks for the account of others. They "make markets" in the sense that it is through the matching of "buy" and "sell" orders on their books that prices are quoted and transactions occur. When the broker arrives at the Steel post, he asks the specialist for a quotation without disclosing whether he is a buyer or seller. The specialist may reply, "fifty-nine and seven-eighths, sixty and one-half." This means that the specialist will buy 100 shares of Steel for himself or others at 59⅞ and will sell 100 shares at 60½. But the broker has been limited to paying a price of 60 by the nature of his order. He may bid 60, but there is no certainty that he can buy it at this price.

If the broker does not execute the order in a brief period, he will leave it with the specialist and depart for other parts of the floor. Thus, the next time the specialist is asked for a quotation he will give the market as 60 bid, 60½ offered. From all the orders that he receives, the specialist makes up what is known as a "book." Other brokers may have entered orders to buy, say 500 shares of Steel at 59½, 1,000 shares at 59, and 300 shares at 58¼. These the specialist enters on one side of his book. Orders to sell, say 400 shares at 61, 700 at 61¼, and 1,000 at 62 are entered on the other side. As orders are executed, entered, or withdrawn, the specialist's book changes accordingly, always reflecting the latest position of the market. If at times there are no others who wish to buy or sell, the specialist is expected to fill the deficiency by buying or selling on his own acount. The privilege of specializing is a franchise granted by the exchange, and the specialist as-

sumes the responsibility for making a "fair and orderly" market. He is thus the focal point in the market for the security in which he specializes.

Let us suppose that, in the instance given, another broker arrives shortly with an offer of 100 shares at 60. Then the transaction occurs for which Mr. Smith has been waiting. After purchase of the stock, a report is given to the same telephone clerk who forwards it to his office, which in turn informs Mr. Smith of the purchase. The entire time consumed by the transaction from giving the order to receiving the report may not exceed five minutes, but this depends on a number of things including the state of the market and the nature of the order. For its services in this transaction, the New York Stock Exchange firm receives a commission—or brokerage fee—varying with the number of shares involved and the price range within which the stock is selling. In our illustration the firm acted as an agent and not as a dealer, since at no time did it take title to the Steel Corporation shares.

This example illustrates the way in which orders to buy and sell securities, originating in all parts of the country, are concentrated in one place. The network of branch offices of commission firms extends to most of the important cities of the nation and to many smaller places as well. In the twilight of the twenties several firms even rented branch office space on luxury liners sailing between this country and Europe, with orders and reports being radioed from and to the ship.

TRADING PRACTICES: SHORT SELLING

The organized security markets are recognized as highly important institutions in contemporary economic life. Hence, most criticism has been directed not at the markets as such, but rather at practices made possible by these markets. This does not or should not mean that such practices are bad in themselves any more than that the securities markets are bad. In fact, it might be desirable at times to encourage some of these practices and at other times and under different circumstances to discourage them. Specific criticisms have been directed against the uses which have at times been made of stock market facilities for purposes that did not appear to be in the public interest.

Essentially, a short sale is a contract for delivery of something the seller does not possess at the time the contract is made. Sometimes sales for future delivery are made because the seller believes that the price may decline prior to the date of delivery, and that he may fulfill his contract by purchasing what he needs to deliver at the lower price, thus obtaining a

profit from the transaction. This would be a possible procedure on a commodity futures market. On a stock exchange the procedure is somewhat different, for the reason that delivery has normally to be made within a few days of the making of the contract. As on commodity exchanges, short selling on security markets invariably is concerned with expectations of price changes. The method of a short sale of securities is more easily understood when its purpose of anticipating expected price changes is kept in mind.

There are three parties involved: the short seller, the buyer, and a third party who may be called the lender. Suppose Mr. A, the short seller, expects the shares of United States Steel Corporation, which are selling at about 60, to decline in price. If Mr. A owned any Steel shares he would sell them, but as a short seller he will sell them even though he does not have them. Mr. B, the buyer, expects Steel shares to advance in price, or at least not to decline; otherwise he would not be interested in their purchase. Mr. C, the lender, owns shares of Steel. He, too, like Mr. B, but unlike Mr. A, is satisfied with the outlook for Steel shares and considers them worth holding. In the terminology of the market, A is a "bear" while B and C are "bulls."

Let us suppose that Mr. A enters into a contract to sell 100 shares of Steel to Mr. B at 60, even though he does not have the stock for delivery. Unless some special arrangement has been made, Mr. B will be entitled to delivery of the stock within forty-eight hours. Mr. A therefore arranges, for a consideration, to borrow 100 shares of the stock from Mr. C, and this is the stock that is delivered to Mr. B.

If, in the course of time, Mr. A's expectations are realized and the price of the Steel shares declines, he can then buy 100 shares in the market at, say, 50, and deliver them to Mr. C. The contract will thus be closed. But, so long as Mr. A is able to borrow the stock, he need not purchase to "cover" his short sale until he wishes to do so. If, however, Mr. A cannot continue to borrow the requisite number of shares from Mr. C or from someone else, he must purchase them. Of course, if he guesses wrong and Steel Corporation shares advance, he will sustain losses and may not have the assets or the fortitude to maintain his position.

TRADING PRACTICES: THE USE OF OPTIONS

Options to purchase or to sell are widely used throughout the business world. An option may be defined as a contract in which one of the parties

acquires the *right* to buy or sell something of value from or to the other, within a specified length of time at a specified price. For instance, a real-estate dealer attempting to assemble a block of separately owned plots of land, and not knowing whether he could get all the plots at reasonable prices, would be foolish to buy each separately. Instead, he would try to obtain purchase options on each piece at the cost of a small cash outlay. When all the options had been acquired, he would exercise them, and so secure possession of the desired property without any individual owner exacting a nuisance price. The Manhattan site for the United Nations headquarters was assembled in just this fashion. Another kind of option was the one obtained by White Brothers from the Torpedo Automobile Corporation in the example given in Chapter 22.

In trading in security markets, options are used primarily to limit risks, to facilitate the distribution of large blocks of stocks or bonds, and as a convenient tool of speculation. An individual buying a security can limit his loss by also *buying the right to sell* the same security at a fixed price within a fixed period of time. This right to sell a security at a fixed price within a fixed time is technically known as a "put." The seller of a security can limit the risk of its advancing substantially after his sale by *buying the right to purchase* the same security at a fixed price within a fixed period of time. This right to buy a security at a fixed price within a fixed time is known as a "call." Of course these options which have the names of puts and calls can be bought and sold without there having been a previous purchase or sale of the actual security. In this event the options are used for speculative purposes rather than for the purpose of limiting risks.

The sale of a small amount of stock is a simple matter. The sale of a large amount, without forcing the price below what is considered a reasonable value, may be very difficult. It sometimes happens that large blocks of bonds or stocks held by estates, institutions, or individuals must be sold. This has sometimes been done by giving a purchase option to an individual, or group of individuals called a "pool" or syndicate. This individual or group proceeds to manipulate the value of the stock for the purpose of distributing the holding to the public without causing a decrease in its price. This form of manipulation, called stabilization, is considered justifiable if carried out in a reasonable manner since, in its absence, the price of the stock would be forced below its former level. But most manipulation in the past was not carried out in a reasonable manner if the manipulators were able to arrange it otherwise. The manner in which an option may be used for manipulation of an unreasonable kind will appear in the following illus-

tration of a typical "jiggle." It is now extremely difficult, if not impossible, to carry out an operation of the kind described. But in the decade of the twenties there were many such instances.

MANIPULATION OF SECURITY VALUES

Let us suppose that a purchase option for 50,000 shares of stock is given to a syndicate or pool, entitling the pool to purchase 50,000 shares at 30, say, within 90 days. Obviously the owner of the block of stock wishes to sell it; otherwise he would not have given the option. This does not mean that the pool is obliged to purchase the stock if it does not wish to do so. But if, within 90 days, the pool can manipulate the market price of the stock above 30, it will then call the stock for delivery at 30 and subsequently sell it on the market at a profit.

Under circumstances that have existed in the past, the pool might attempt to obtain the co-operation of a specialist in the stock, perhaps by allowing him to participate in the profits. Efforts might be made to enlist the enthusiasm of those who write for financial journals or newspapers, and a number of stories might appear regarding the promising prospects of the company whose stock is to be manipulated. Of course the members of the pool let their friends know of the good thing. These friends in turn pass on the word to their friends who do likewise. Gradually, a large number of people come to believe that the stock will rise in price in the near future. When everything is ready, the pool may begin to create activity in the issue by buying and selling to itself through different brokers. Such transactions, in which the right hand buys what the left hand sells, are known as "wash sales" or "matched orders." Here the "buying public" will begin to take the bait. People may have read somewhere that the company is doing very well. They may have heard (very confidentially) that the stock was due to rise, and this is confirmed in their minds by the fact that the new activity in the stock means that "something is doing." Many people begin to buy the stock.

THE OPERATIONS OF POOLS

On the strength of this demand the pool begins to sell more stock than it buys, and, in the course of several days, may work itself into a short position of, say, 10,000 shares at an average price of 30. The purpose of this maneuver is subtle. It means that the pool has increased its buying power by 10,000 shares for its short position must be covered by comparable pur-

chases. If the pool had purchased 10,000 shares when the operation began it might have succeeded in putting the stock up only a point or so, because holders would have been willing to sell. But, after the excitement has started, the total offerings up to, say, 35 may not exceed 10,000 shares. The specialist knows from his book just how thin or heavy the offerings are at all times. This is valuable information to the pool, for the exercise of its buying power must be skillfully timed. It will have more effect on the price of the stock if exercised when the offerings are few than when they are many.

It is obvious that if, through purchasing to cover their short position of 10,000 shares, the pool pushes the stock up to 35, it will have suffered a loss on this part of its transactions. But the stock is now selling at 35, and it can call 50,000 shares for delivery at 30. Since "the public" is still buying the stock as avidly as before—if not more avidly—the pool will probably be able to sell the 50,000 shares of stock at the new higher level and close its books with a large profit on the total of its operations.

Manipulative practices have not always depended upon the use of options. In cases in which they did not, it was usual for a pool to spend some time in quiet accumulation of a block of stock before an attempt was made to put its price up and distribute it to the public. The usual methods of doing this, however, were not unlike those of the above illustration. A variant of the pool operation was to accumulate a high-priced stock in which the public was not interested. ("The public" is more likely to be interested in lower-priced stocks.) After accumulation, the issuing company might be induced to "split" the stock by giving each stockholder five shares for each share held. The new shares would presumably sell for just one-fifth as much. But this does not necessarily follow. The typical small investor would rather buy ten shares at 30 per share (or even at 35 per share) than two shares at 150 per share. The increased buying of the stock as a result of the split-up would give the pool an opportunity to unload at a profit.

USE OF CREDIT IN SECURITY MARKETS

Judged by most standards, anything of value that can be sold quickly, without the sale causing any considerable fall in its market price, constitutes suitable collateral for securing a loan. Stocks and bonds qualify on both scores; hence, corporate securities are generally regarded by lenders as providing desirable collateral. This is especially true of issues listed for trading

on organized exchanges. It also is true, but in lesser degree, of issues traded actively in over-the-counter markets.

Direct security loans. Loans on securities are made in two principal ways. Direct security loans are obtained by the borrower from banks or others in the same manner as any other type of loan. The borrower will secure the use of a definite amount of money for a definite period of time, at the end of which the loan is to be repaid together with a definite amount of interest, expressed as a percentage of the principal. In place of the provision to repay the principal with interest at a definite time, there may be a provision to repay the principal in installments during the life of the loan, a process known as amortization of the loan.

Indirect security loans, or "call loans." When an individual goes to a brokerage firm and deposits $5,000 in order to buy $10,000 worth of stocks or bonds, he is hardly conscious that a loan is involved in the transaction. The machinery for financing the purchase of securities through what is called "margin trading" works with great efficiency; sometimes, perhaps, with too much efficiency for the good of the borrower.

Suppose an individual, after depositing $5,000 with his broker, directs him to purchase 100 shares of American Can common stock at a cost of $10,000. The purchaser will be asked to sign an "hypothecation card" which permits the broker to use the purchased certificate of 100 American Can as collateral for a loan. Of course, the broker must pay the seller of the stock the full $10,000 before the certificate will be delivered to him. He can do this by using the $5,000 deposited by his customer, plus some of his own capital or the proceeds of loans previously obtained on the securities of other customers trading on margin. When the broker receives the American Can certificate he will increase his borrowings so as to be able to accommodate the next margin purchase of one of his customers. A significant point to note in these arrangements is that no plan of repayment has been provided by or for the customer who has bought more stock than he can pay for. In fact, if the margin trader guesses correctly, and the value of his equity is increased, say from $5,000 to $8,000, the broker is likely to telephone him and suggest that he buy $6,000 more stock, thus increasing his loan.

The nature of the loans obtained by the broker to finance this business is of special interest. He may obtain a time loan, but it is more usual for him to borrow funds through the so-called call market. He puts a number of different stock certificates or bonds into what is called a loan envelope and obtains a "call loan" secured by the lot. This means that the loan is callable by the lender on any day without prior notice. The loan is made

to the full amount of the market value of the various stock certificates or bonds contained in the loan envelope and is adjusted daily to conform to the market value of these various securities. It follows that this type of loan is a particularly safe one for the lender, and it long has been a profitable one for commercial banks in New York City.

REGULATION OF SECURITY MARKETS

There has been a tendency in security markets both here and abroad for practices to develop which have prevented these markets realizing their maximum social usefulness. At times practices have been indulged in that violate the basic principle of responsibility of men in their relations with each other. Certain types of practices are so manifestly inequitable and unjust that they can be defined as legally fraudulent. Legal fraud usually involves a knowingly false and intentionally deceptive statement for the purpose of gain. Remedies are available through the statute of fraud. Such remedies have been supplemented since about 1910, through the enactment by the several states of so-called blue-sky laws, which have been predominantly, but not exclusively, concerned with the prevention of fraud in the marketing of corporate securities. Still more comprehensive control, going considerably beyond the mere prevention of fraud, was embodied in federal legislation, passed by Congress in the early years of the New Deal, and still in force.

The federal laws relating to the operations of security markets rest upon the constitutional powers of the national government over interstate commerce, money, and the use of the mails. This legislation is not contained in any single act of Congress where its provisions are described in systematic fashion. Rather, various subjects or phases of regulation have been dealt with in different enactments. The most important of these acts are the Securities Act of 1933, the Banking Act of 1933, the Securities Exchange Act of 1934, and the Public Utility Holding Company Act of 1935. This legislation deals principally with four topics: (1) the issuance of new securities, (2) the disclosure of information about new and old securities, (3) trading practices on security markets, and (4) the control of credit in security markets.

The method chosen for attacking the problem of security regulation was that of exercising control through an administrative agency. The Federal Trade Commission was initially selected, but the Securities Exchange Act of 1934 created the Securities and Exchange Commission of five members, and the task of regulating security dealings in most of their phases

was turned over to the new agency. The one significant exception is the control of credit used in security dealings, which is exercised by the Board of Governors of the Federal Reserve System.

PROVISION OF INFORMATION

The main purpose of the Securities Act of 1933 is to protect the buyer of *newly issued* corporate securities by requiring a full disclosure of material facts and by penalizing any failure to furnish them in connection with the sale of the security. The registration statement is the basic document for this purpose, and its use has already been described in Chapter 22. While it set rigid standards for the disclosure of information in connection with new issues, the 1933 act did nothing to insure that investors would continue to be supplied with information about the corporation after the issue of securities had been made. The federal regulation of new security issues therefore has little effect upon the vast mass of securities traded on, say, the New York Stock Exchange—except in the case of the securities of those few corporations which happen recently to have raised fresh capital by public issue.

In an earlier stage of corporate development, when corporations were more closely owned, the problem of current disclosure was not so important. As the conditions of corporation finance became more complex and the securities of corporations more widely held, it became increasingly important for the public to know the details of corporate practices and developments. The New York Stock Exchange took the lead in the provision of current data by making certain requirements of corporation disclosure prerequisite to the listing of securities on the Exchange. In this the Exchange was opposed by many corporation managements who appeared to regard information about corporate business as the property of insiders. In 1933 for example, the Exchange received a letter from a high official of one of the nation's largest corporations criticizing its listing requirements: "The management of the Exchange is responsible to its members. The management of the Exchange is neither responsible to the company's stockholders in respect to the information to be published regarding its affairs, nor in any position to determine what the best interests of the stockholders are in that regard."

Nevertheless, valuable work has been done by the New York Stock Exchange (almost alone among security exchanges) to improve the standards of corporate accounting and reporting. Through many years listing agreements have been made progressively more rigorous. These agreements now

require, among other things, that corporations publish periodic statements of earnings (quarterly, if feasible) audited by independent accountants and in the form contained in the listing application, that audited balance sheets be made available annually, and that no significant change in depreciation policy, which might give a false impression of earning power, be made without calling attention to the fact in the next published financial report. In addition to these requirements the Exchange has taken the position (and atempted to enforce it informally) that stockholders are entitled to know the amount of undistributed earnings, that "other income" should be separated from operating income, that nonrecurring items should be so indicated, and that the basis for the valuation of assets should be clearly stated.

PUBLICITY REQUIREMENTS OF THE SECURITIES EXCHANGE ACT

The New York Stock Exchange listing requirements pertain only to those issues traded on that market, while the disclosure features of the Securities Act of 1933 relate only to new issues. The disclosure features of the Securities Exchange Act of 1934 are designed to supplement and amplify both of these earlier arrangements. In passing this enactment Congress described the importance of adequate current disclosure as follows:

> The idea of a free and open market is built upon the theory that competing judgments of buyers and sellers as to the fair price of a security brings about a situation where the market price reflects as nearly as possible a just price. Just as artificial manipulation tends to upset the true function of an open market, so the hiding and secreting of important information obstructs the operation of the markets as indices of real value. There cannot be honest markets without honest publicity. Manipulation and dishonest practices in the market place thrive upon mystery and secrecy. The disclosure of information materially important to investors may not instantly be reflected in market value, but despite the intricacies of security values, truth does find relatively quick acceptance on the market.
>
> Despite the tug of conflicting interests and the influence of powerful groups, responsible officials of leading exchanges have unqualifiedly recognized, in theory at least, the vital importance of true and accurate corporate reporting as an essential cog in the proper functioning of the public exchanges. The reporting provisions of the proposed legislation are a very modest beginning to afford that long denied aid to the exchanges in the way of securing proper information for the investor.

Under the provisions of the act of 1934 all unexempted national securities exchanges themselves must be registered with the Securities and Exchange Commission. Likewise, all securities listed on registered exchanges,

or admitted to unlisted trading privileges, must be registered. Registrants are required to keep up-to-date the information and documents filed with the commission at the time of original registration and to furnish annual or quarterly reports which meet the commission's requirements as to form, content, and accounting method.

The information required includes a statement of the stock interest and remuneration of officers, directors, and any beneficial owners who hold 10 per cent or more of the equity (normally the common stock) in the enterprise. (A beneficial owner is someone who enjoys the income from a security, whether or not he possesses it outright.) Moreover, such officers, directors, and beneficial owners must individually file statements of their ownership and these are publicly reported. If any such person buys an equity security of the subject corporation and sells it at a profit within a six-month period, or sells and repurchases at a profit in a six-month period, such profit is recoverable by the corporation or, if the corporation does not take action, by any stockholder on behalf of the corporation. This measure is intended to prevent the use of inside information for personal profit. Short sales by officers, directors, and owners of as much as 10 per cent of the corporation's equity, are forbidden.

The reports required by the SEC have been criticized as being too long and detailed for use by the average investor. To understand the significance of a typical registration statement would require more time than the typical security buyer has to give. The Commission has attempted to rectify this situation by simplifying its forms, but the documents are still long and laborious to read. Even the prospectus, which is an abbreviation of the registration statement, sometimes runs to twenty pages or more. It may be said, however, that the present arrangements at least make the information available, and much of it reaches the investing public through reports made by professional security analysts.

CONTROL OF TRADING PRACTICES

Discussions of the control of trading practices on security markets usually become entangled with the meaning of terms such as investment and speculation, or stabilization and manipulation. It is exceedingly difficult to know when investment becomes speculation and stabilization becomes manipulation. It has been said facetiously that an investor becomes a speculator when his purchase turns out profitably, and a speculator becomes an investor when his purchase turns out badly. Again, it is difficult to see why the stabilization or maintenance of a price that would fall in the absence

of support is less manipulative than an effort to raise a price that would otherwise remain at its current level. Nor can speculation and manipulation be distinguished and condemned as the exercise of advantage for personal gain, for, in some sense, that is the purpose of all business enterprise.

Undoubtedly the framers of the legislation, and the Securities and Exchange Commission which has administered it, felt these difficulties. To describe just what practices the commission decided were undesirable, and why, and to judge the success of the commission in ending such practices, would require long and technical treatment. Here, a brief discussion of some leading types of regulation must suffice.

By the terms of the Securities Exchange Act, the commission has been provided with some of its strongest powers. These include the power to regulate and prescribe the functions of members of the exchanges, to regulate or prevent trading by members on the floor of the exchanges, to prevent "excessive trading" by members, and to regulate odd-lot dealers and specialists. These are broad powers which may be used to control the activities of the exchanges so far as their membership is concerned. Many of the past abuses of security trading have originated with members of the exchanges, but these particular powers do not reach abuses that are instigated and carried out by the public.

The act goes further and forbids *any person* to use the facilities of any national securities exchange to create "artificial" prices. Certain specific practices are forbidden to all, including wash sales and matched orders (described above), dissemination of information about market activity for the purpose of affecting the price of securities, and the issuance of false and misleading statements about securities. In addition the commission may restrict or prohibit the use of puts and calls, of short sales (also described above) and of stop-loss orders (instructions to sell if the price should fall below a given level). However, no regulations have been issued as yet regarding the use of puts and calls or the use of stop-loss orders.

TRADING RULES OF THE SEC

The commission's short-selling rules originally in effect permitted the short sale of a security at a price *above* its last sale price. This has been amended to permit a short sale at the price of the last sale, if the last sale is higher than the sale which preceded it. It is interesting to note that the commission has not forbidden short selling but has instead limited its use.

As a supplement to the rules of the various exchanges governing the activities of their members, the commission keeps constant watch on the

current volume of sales and price movements of some 3,400 different issues in order to detect manipulative practices by either exchange members or the public. This is a tremendous task and involves constant scrutiny of the "ticker tape" by a sizable staff. Enforcement activities in this connection are, if possible, preventive rather than punitive. Complaints, although not always trustworthy, provide another means of detecting manipulation. The time element in conducting investigations is materially reduced through the use of preliminary and informal inquiries into the causes of unusual market behavior. If suspicions are increased as the result of these "flying quizzes" an investigation is made to bring out facts and circumstances that may be in violation of the law.

Although the Securities and Exchange Commission has permitted the exchanges to adopt their own rules governing the trading of their members, it has publicly raised several questions in this connection. The operations of the member trading on the floor of the exchanges for his own account may or may not be in the public interest. On the one hand, it has been held that his speculative activities increase the size of the market and make it possible for investors to buy and sell more easily, which is to say that the liquidity of the market is increased. But the commission has not fully accepted this argument and has held that certain speculative activities, not strictly manipulative, are not in the public interest, since speculation may make the market less stable than it ought to be. It has been held that a tendency exists for professional traders to follow the market; that is, to sell short for speculative profit at a time of public distress and to buy when the markets are already booming from public enthusiasm. If this be true, the operations of the professional trader merely accentuate the movement of the market in a given direction instead, as has been claimed, of providing a stabilizing influence.

What has been said of the professional trader has also been applied by the commission to the specialist. Former Chairman Douglas once said that it appeared from the commission's studies that "members of the Exchange trading for their own account—particularly the specialist—either create the daily price fluctuations or else contribute materially to their severity." He went on to question "the validity of the common assertion that the existence of the specialist and the floor trader is justified on the basis of their stabilizing influence on the market and their resultant benefit to the members of the public who enter the market." Those who disagree with Chairman Douglas have pointed out that the historical development of any type of market, security or otherwise, discloses an organization that includes professional dealers as well as agents. It has been argued that whether the

professional dealers are called floor traders or specialists, or whether they operate as a concentrated group on the floor of an exchange or are scattered in their own offices, they are still an indispensable part of an effective market.

CONTROL OF CREDIT IN SECURITY MARKETS

It has been pointed out that a large-scale use of credit occurs in both the new-issues market and the organized market for old issues. Underwriting syndicates usually borrow funds to carry new issues in the process of their distribution. Some investors, and most speculators, at times buy more securities than they can pay for. In this event, the purchaser may obtain a loan directly from a bank, or indirectly from a bank through his broker. In the latter case it is the broker who borrows directly from the bank. The Banking Act of 1933 and the Securities Exchange Act of 1934 contain provisions that relate to the regulation of security markets through the control of security loans.

In the decade of the twenties most large commercial banks owned security affiliates engaged in the business of underwriting and selling new security issues. Needless to say, the loan relationships between a security affiliate and its parent bank were sometimes "informal." The Banking Act of 1933 prohibited commercial banks from further participation in the selling of new securities directly or indirectly through security affiliates. The act goes further in providing that each Federal Reserve Bank shall keep itself informed of the general character and amount of loans and investments of its member banks with a view to ascertaining whether "undue" use is being made of bank credit for any purpose inconsistent with sound credit conditions. Undue use of bank credit is reported to the Board of Governors of the Federal Reserve System in Washington, which may then bar the offending bank from using the credit facilities of the System. Still further powers are created by the provision that the board may fix, for each Federal Reserve district, the amount of loans secured by stock or bond collateral made by member banks as a percentage of the capital and surplus of the individual bank.

The administration of the credit-control features of the Securities Exchange Act of 1934 is likewise delegated, for the most part, to the Board of Governors of the Federal Reserve System. The board is required to prescribe from time to time rules and regulations with respect to the amount of credit that may be extended and maintained by banks and brokers on any security registered on a national securities exchange. This

provision includes loans made by brokers to their customers and loans made by banks directly to the owners of securities, but does not prescribe what percentage of the market value of a security a bank may lend a broker in the call-loan market.

REGULATION OF MARGIN REQUIREMENTS

A "margin" is the technical term used to describe the difference between the value of a security and the amount which a broker or bank lends a customer to finance his purchase. In other words, the margin is the amount of money (or equity) which the customer has invested in the transaction at any time, although not necessarily the amount originally invested. The principal control exercised by the Federal Reserve Board is the power to vary the minimum permissible margin between broker and customer. Since the Securities Exchange Act was passed, margin requirements have been at proportions varying all the way from 25 per cent up to 100 per cent. At the latter percentage, of course, all transactions occur on a cash basis. The board raises margin requirements when it feels that speculative ardor should be dampened. For instance, all stock trading was placed on a cash basis early in 1946 at a time when the stock market was rising and active. A sharp decline occurred in stock prices in September 1946, and on February 1, 1947, margin requirements were lowered to 75 per cent.

The main responsibilities of the Securities and Exchange Commission in connection with credit control are two. One is the enforcement of the regulations described above. The other is the enforcement of a provision that registered brokers may borrow only from banks that are members of the Federal Reserve System; otherwise regulation of margin requirements by the Reserve Board would obviously be ineffective.

A TENTATIVE APPRAISAL OF REGULATION

Regulation of the security markets on the scale described in this chapter is a new phase in the organization of our economic life. The Securities and Exchange Commission, one of the most powerful of government agencies, is also one of the youngest. An appraisal of the significance of so striking a departure from past practice must of necessity be tentative.

It has been seen that security markets in general have three basic functions to perform: (1) to make new savings available for new investment in the aggregate, (2) to serve as a guide to the most appropriate flow of savings to investment in detail, and (3) to provide liquidity to the bonds and

stocks that represent the participation of individual savers in business enterprise. The degree of success or failure of regulation to date can be judged in part by whether it has facilitated or impeded the performance of these basic functions.

The disclosure requirements of the commission have undoubtedly prevented many promotions that are either fraudulent, or are so undesirable economically as to be a waste of the community's resources. The effectiveness of the legislation in this regard was shown by the migration of some of our more enterprising promoters to the freer air north of the border. When individuals know they will be compelled to meet certain exacting tests in the spotlight of publicity, they are less likely to undertake questionable ventures. It is, however, impossible to estimate how much of the nation's savings have thus been prevented from flowing to inappropriate uses. Again, present disclosure requirements provide a wealth of source material which experts may use in informing the general public as to the soundness of various investments. Markets thus become more effective in reporting "real values" as knowledge becomes more widespread. Finally, it may be said that disclosure requirements tend to elevate the level of business standards in the financing of desirable enterprise. It is but natural for lawyers, accountants, appraisers, engineers, corporate officials, and investment bankers to exercise caution when they know that subsequent publicity will test their reputations.

On the other hand, it has been said that the costs and dangers of present disclosure requirements to corporate officials and investment bankers tend to place a damper on new financing. This may have interfered with the launching of new business enterprises, and thus have helped to strengthen the hold on their markets of those that already are in operation. Moreover, it is held that the minute requirements of disclosure take much of the time of corporate executives that should be devoted to the active management of their own businesses.

In spite of these criticisms it is generally agreed that disclosure is desirable and necessary and that the present regulations supply a long-felt need. It is possible that the specific nature of the requirements may have slowed down the flow of savings to investment in the aggregate, but it would be hard to deny that disclosure has insured a more appropriate direction of the reduced flow into desirable productive enterprise.

The regulation of trading practices has substantially eliminated the kind of obvious manipulation described in this chapter. It has thus prevented in large degree the creation of relative price disparities in the security markets that are not reflections of basic economic changes. Critics have argued, how-

ever, that the markets have become less liquid. This decrease in liquidity, it is held, has serious implications for the general economic life of the nation. In the first place it may have the effect of discouraging purchasers of new issues. More important, the organized markets are less able to absorb a given amount of selling or buying without experiencing greater price movements than was formerly the case. Since a change in dominant business expectations may result in just as much selling or buying of securities as formerly, the markets are now held to be less stable, a factor making for greater business uncertainty. This was a criticism heard quite generally after the rather sharp declines in security prices which occurred in the fall of 1937 and again in the fall of 1946.

Attitudes and opinions in regard to the regulation of security markets in all of its phases are in a formative stage. Long experience may be necessary before a final judgment can be made. At present there is but one principle upon which there is general agreement. There must be no return to the loose finance of the decade of the twenties. Regulation that will avert this is necessary for organized and stable economic life.

SECTION SEVEN

OUR PUBLIC FINANCES

24 Government expenditures and revenues

25 Our tax system

26 Government borrowing

ECTION SEVEN

OUR PUBLIC FINANCES

NTRODUCTION

One of the most significant developments in the recent history of the Jnited States has been a pronounced increase in the activities and costs of government. An analysis of these changes and what they signify must be part of any study of American economic life. The rapidly growing importance of the state as financier exerts far-reaching influences upon the economic affairs of large numbers of people and upon the stability and control of the economy as a whole. Still another consequence of the rising trend of government expenditures is the opinion entertained by many people today that the United States is suffering from too much governmental participation and interference in economic affairs.

The rapidly increasing costs of government in the United States provide a rough measure of the increasing importance of government in our economic affairs, and so have given rise to some general questions of great urgency. For what reasons do governmental activities expand? How wide is the "legitimate" scope of governmental functions? Is there any general principle by means of which it is possible accurately to set limits to the appropriate spheres of public and private action? It is doubtful if exact answers can be given to any of these questions, although numerous efforts have been made to answer them.

In 1859 John Stuart Mill attempted to formulate a workable principle which he thought would operate as a bulwark against any tendency toward overgovernment. His opinion, expressed in the famous essay *On Liberty*, was that governmental powers could rightfully be exercised over any individual only to prevent harm to others. Admirable as this standard may have been in an earlier day—though even Mill himself encountered difficulty in ap-

plying it in concrete cases—it is scarcely adequate at the present time. The problems of a highly developed economy based on private enterprise and free markets cannot be met by any such negative conception of the functions of the state. Government activity is recognized today as a positive factor in the national economy, although its limits cannot be precisely and rigidly defined. Governmental bodies in the United States have shown a tendency to encroach upon the traditional spheres of private action whenever it has seemed necessary or expedient to do so. For example, when private enterprise was unable to cope with the unemployment problem, public agencies were compelled to take over the function of relief work.

Along with such "encroachments" of government have come other, more subtle and equally far-reaching, economic problems. The various "layers" of government—especially, of course, the federal government—now collect and spend so large a proportion of the national income as to exert powerful controls over the volumes of production and employment, and, consequently, over the flow of national income itself. It is with these problems, rather than with the related ones arising from the "encroachments" themselves, that we shall be concerned in the following three chapters.

A grasp of these problems requires that we study the *fiscal* activities of government. The adjective comes from *fisc*, which in Latin meant, and in English still means, the public treasury. Fiscal activities are, therefore, activities concerned with raising and spending public revenues. The entire subject usually is called *public finance*, as distinguished from *private finance* or the financial affairs of business firms and individuals. To "finance" an expenditure is to furnish the funds for making that expenditure. Thus the study of finance involves ways and means whereby funds can be provided for the attainment of a given object or series of objects. Public finance concerns itself with ways and means of furnishing government with the money it needs for its operations.

CHAPTER TWENTY-FOUR

Government expenditures and revenues

WHY OUR GOVERNMENT HAS EXPENSES

Most of the activities of government lie in fields which, for one reason or another, it would be uneconomical or socially undesirable to leave to private enterprise. This is especially the case with the oldest functions of government, such as national defense, the dispensation of justice, and the coinage of money. Of only slightly more recent growth is governmental initiative in carrying the mail and in constructing and maintaining highways and harbors. Still later in point of time, chiefly within the last hundred years, came public education and numerous other so-called welfare activities of government, such as provision of hospitals, libraries, and recreational facilities. More directly concerned with the industrial development of the nation are outlays for the reclamation of natural resources, for the conduct of scientific research, and for subsidies to particular groups of producers, such as farmers, silver-mining companies, and merchant-ship operators.

One school of political thought holds that government should confine itself to those few fields of action which are obviously and completely incapable of being cared for either by private profit-making enterprise or by charitable foundations—such fields, for example, as the national defense. This school of opinion holds further that the regulation of private business should be confined to the barest possible minimum. The view originated with the English classical economists of the early nineteenth century, who believed with Gladstone that money should be allowed to "fructify in the pockets of the people," and that as little as possible of a man's income should be taxed away to support the activities of government. The growth in popular demand that the government provide services, both to the general public and to private business, and that these services [illegible]

terms which make them available to all, has reduced the adherents of the nineteenth-century view to a small minority whose opinions have today but slight influence on public policy.

THE GROWTH OF GOVERNMENT FUNCTIONS

It is a long time now since the tendency was first observable, in this as in other countries, for the scope of governmental functions to broaden, and for the burden of taxation to increase in consequence. While this tendency undoubtedly has the endorsement of public opinion, and indeed has developed in response to popular demand, the precise demarcation of governmental functions remains at many points highly controversial. Thus the public development of electric-power resources cannot yet be regarded as accepted policy in this country, and the public provision of medical care has so far been approved only in exceptional circumstances—as, for example, in the case of communicable diseases. The payment of subsidies to particular groups of producers has been vigorously opposed, but has so long a history that it may almost be regarded as accepted policy.

Sometimes government charges for its services, as in the case of carriage of mails by the federal government, or the operation of a municipal power plant. But most governmental services are provided free: we need think only of highways, education, or the national defense. By and large these free services are paid for by tax revenues—federal, state, or local. Except on rare occasions, taxes are not assessed according to the benefit which an individual receives from the services of government, but instead according to some criterion (often rough-and-ready) of ability to pay. Persons with much property, large incomes, or expensive tastes tend to pay far more taxes than persons not having these advantages. Yet, while the wealthy pay more taxes, they also tend to make less use of many services—e.g., education, and care of the infirm and aged—provided by government than do people in the lower income brackets. Thus, so far as the welfare activities of government are concerned, public expenditures have the effect of partially redistributing the nation's wealth and income.

INDIVIDUAL BENEFITS AND COSTS OF GOVERNMENT

In reality, the primary purpose of welfare activities is neither to take from the wealthy nor to give to the underprivileged; it is rather to help the latter to maintain a certain minimum standard of welfare for the benefit

of the entire community, the wealthy included. What happens in practice is that the state decides certain services shall be made available to all, even though it may be inconvenient, or even impossible, to recover from the recipient the full cost of providing such services. Typically the state further decides to finance the expenditure from tax revenues assessed according to received notions of ability to pay. The simultaneous pursuit of these two policies results in a certain transfer of income from rich to poor.

The fact that governments commonly make heavy outlays to ameliorate the lot of poorer people suggests an important difference between the private and the public sectors of the national economy. Governmental services tend to be supplied by the state without regard to the citizen's ability to buy them. His needs, usually, are the paramount consideration. In the economic affairs of private people, on the other hand, possession of goods and services depends upon a person's ability to pay, quite apart from any need. This ability, in turn, is governed by a bewildering variety of individual and social forces operating to determine the distribution of the aggregate national income.

THE BUDGET

The fiscal operations of the public economy, like those of many private business enterprises, are organized and conducted through a budget. The budget is an itemized plan of public expenditures and receipts prepared in anticipation of a given period of time, usually the fiscal year. It analyzes anticipated expenditures of every kind down to the smallest possible subdivision, and indicates the various estimated revenues from which the expenditures are to be made. The budgets of some American units of government such as the federal government, the governments of some of our more populous states, and that of the city of New York are elaborate and voluminous documents.

The powers of representative bodies rest ultimately upon control of the purse, and all sovereign legislatures guard jealously their right to this control. In most governments, however, it is recognized that the executive is in a better position to understand governmental needs and resources as a whole and to assume responsibility for the drafting of a financial program. The usual practice in democracies calls for submission of a budget proposed by the executive to the legislature for adoption. Normally the legislature reserves the right to criticize the budget down to the last detail, and even to substitute entirely new proposals of its own.

The procedure in framing our federal budget is briefly as follows. The preparation of the budget for the fiscal year beginning July 1 extends all the way back to the preceding fall. At that time all governmental departments and spending agencies submit estimates of requirements for the next fiscal year. These estimates are reviewed in detail by the Bureau of the Budget and then collated by the Treasury. After approval by these agencies, the proposed expenditures for the fiscal year to come, together with estimates of the probable revenue from the existing tax structure, are submitted by the President to Congress in January. The budget is turned over by the House to its Appropriations Committee for a review of the proposed expenditures. Meanwhile the Treasury may submit proposals for changes in the tax structure, and these are referred to the House Committee on Ways and Means. Both committees commonly hold extensive but unco-ordinated hearings. After approval by the House, appropriations and proposals for changes in taxation go to the Senate, where a similar procedure is followed. Differences between the two houses are ironed out in conference, and the various bills are sent to the President for signature. In the case of appropriation bills it is important that all stages be completed before July 1, for otherwise the operations of government may be held up for lack of funds.

GOVERNMENT FINANCE *VS.* PRIVATE FINANCE

It will be observed that significant differences exist between government finance and private finance. First, the motive underlying most budgetary outlays by the government is the promotion of public welfare rather than anticipation of net profit, most services being supplied free or at low cost. In the field of private enterprise, on the other hand, the primary motive is the desire for profit. Second, because of its powers of sovereignty, government is in a position, within wide limits, to adjust its revenues to meet its proposed expenditures.

Normally, in planning its expenditures, a unit of government first determines which services the community may be expected to need or demand. The choices having been made, the next task is to ascertain the costs of the services and to discover ways of apportioning the costs among the taxpayers. In this way, necessary revenues tend to be governed by the magnitude of expenditures. In the case of a business firm, adjustments tend to occur in the opposite direction: after estimating probable sales, the executives decide how much they should spend for materials and labor.

These remarks apply to more or less regularly recurring expenditures

for current purposes. Neither governmental units nor private business make it a rule to finance capital expenditures out of current receipts. When a city needs a new public building or an improved water supply, it issues bonds, much as a private corporation might. Here again, however, a distinction must be made, for interest on municipal bonds may be paid from taxes, whereas corporate bond interest is a charge against earnings. Capital expenditures by governmental units must be justified in the eyes of the citizenry, but they need not "show a profit" in the commercial sense of that phrase. Many municipal improvements of permanent value (in a fashion similar to federal measures for the conservation of natural resources) do not yield any direct cash revenue whatever. Their ultimate value to the community is not less on that account; moreover, many such improvements could not have been undertaken at all had it been necessary to finance them entirely from current tax revenues.

USES OF GOVERNMENT CREDIT

Governmental units also borrow for other purposes than the financing of capital expenditures to pay for permanent improvements. In normal times a rough equilibrium between a government's revenues and its expenditures can be established in advance, although a deficit or a surplus may emerge at the end of the year as a result of inefficient planning or unforeseen contingencies. It may happen, however, that during a business depression tax revenues decline at a time when a corresponding reduction of expenditures would cause great hardship. Indeed, at such a time expenditures, as for relief, may actually have to be increased. On these occasions expenditures must, willingly or unwillingly, be met in part by borrowing. This was a common experience among American governmental units during the Great Depression of the thirties.

An even more important cause of borrowing, so far as the federal government is concerned, has been war. It is the universal experience that, when military operations are conducted on any considerable scale, expenditures tend inexorably to increase further and more rapidly than tax revenues. This is true even though tax rates are raised and new taxes imposed. During World War II, for instance, federal expenditures rose to about fourteen times those of the prewar period, but tax revenues in 1944-45 were only about eight times as large as in 1939-40. Much the largest part of the present federal debt of around $260,000,000,000 is to be explained by the cost of World Wars I and II.

FEDERAL EXPENDITURES IN PEACETIME

Prior to 1917 the cost of the federal government did not exceed $1,000,000,000 a year. During the twenties federal expenditures ran at the rate of about $4,000,000,000 yearly. After 1930 federal outlays rose steadily, reaching around $8,000,000,000 annually in 1937 and 1938. The expansion of public spending during the thirties coincided with the Great Depression and was caused in large part by the assumption of responsibility by the United States Treasury for major expenditures on relief and public works to mitigate the effects of the slump. The rise in federal outlays after 1930 was not accompanied by any corresponding increase in revenue, nor by any significant decline in spending by state and local governments. For the first time in the history of the nation a sizable peacetime growth occurred in the national debt. Even prior to the outbreak of World War II many people had come to believe that the cost of government in the United States had reached an alarmingly high figure.

Numerous causes have contributed to the rising level of public expenditures. The population has doubled since 1890. A second cause has been instability in the purchasing power of the dollar: the rising price trend from 1900 to 1920 helped greatly to increase the cost of government during that period. Prices fell somewhat after 1920, and particularly after 1930, but World War II has seen a further marked decline in the commodity value of the dollar. By far the most important cause of the long-term growth in federal outlays, however, has been the continuous broadening of governmental functions and the acceptance of responsibility in Washington for the welfare and economic security of individuals, as well as for the conservation and development of natural resources, on a scale and in a manner which would have astonished our forefathers.

In some degree the growth of the wealth and income of the nation has furnished a prior condition for the growth in governmental functions. The rising productivity of American industry enabled the government to make a draft upon the national income which would have been intolerable in past eras when the country was much poorer in material goods. In technical language, the taxable capacity of the economy has expanded greatly, even though tax revenues have not kept pace with recent rates of public expenditure.

Total outlays by federal, state, and local governments rose from thirteen billion dollars in 1930 to fifteen billion in 1935, seventeen billion in 1938, and over one hundred billion in 1945, the peak year for wartime ex-

penditures. During the fiscal year 1948 (i.e., the twelve months ending June 30 of that year) the federal government spent $36,000,000,000, to which must be added about $10,000,000,000 for state and local governments, making a total of about $46,000,000,000 for all jurisdictions. The present cost of government is thus about two and one-half times what it was before the onset of World War II. In part the higher level of expenditures is due to the fall in the commodity value of the dollar, in part to the interest charge on a vastly increased public debt, and in part to a peacetime military establishment much larger than in 1938.

THE NEW DEAL AND THE FEDERAL BUDGET

As has already been hinted, the widest expansion in peacetime governmental functions in recent decades occurred during the New Deal period of the thirties. Perhaps the largest changes in the scope of federal expenditures were introduced with the budget for the fiscal year 1934, the first of a series of New Deal budgets. Proposals were made for a tremendous expansion of federal functions and large appropriations were included for relief and public works. Certainly the depression of business had been very severe, and in 1933 the incoming administration had a mandate to put people back to work and to carry out a number of reforms, many of them expensive. Certainly, too, business improved, though in somewhat halting fashion, under the ministrations of the New Deal.

How far government expenditures—or the New Deal policies giving rise to them—were actually responsible for recovery from the slump is a hotly debated issue which cannot be discussed here.[1] At any rate federal outlays were boosted to seven billion dollars in the 1934 budget, a jump of almost two billion over 1933. Approximately 60 per cent of the appropriations were for "recovery and relief"—designed to finance a vast array of depression-fighting measures which included loans made by the Reconstruction Finance Corporation, agricultural aid, emergency conservation work, and various forms of direct and work relief. The pattern of expenditures introduced in the 1934 budget continued, with some variation, to the end of the decade. By 1940 federal outlays had risen to over nine billion dollars.

As a measure of changes wrought by the New Deal, the principal items in the 1940 budget may be compared with similar items in the budget for 1930. Thus total federal expenditures in 1940 were more than double

[1] Deficit spending as a means of stimulating employment of productive resources is treated in Chapter 31.

those in 1930. The "regular" item of expenditure which showed the greatest increase over 1930 was that for national defense. In 1940, the outlay for this purpose was almost one and one-half billion dollars, more than twice as much as in 1930. Other "regular" expenditures increased, though not in like proportion.

The largest part of the increase in outlays during the decade was due to the rapid expansion of federal functions of an "extraordinary" character. The greatest single item of this nature was the category, "relief expenditures." In 1930 the category was not one under which the federal government spent any money; in 1940 the appropriation for relief amounted to more than one and three-quarter billion dollars. During the decade the increasing sense of responsibility of the federal government was extended to include another problem area—the depression in agriculture. In 1930 outlays for this purpose were less than a quarter of a billion dollars; by 1940 they had risen to more than one and one-quarter billion, a sum which covered the expenses due to subsidies, production control, conservation, and other parts of the New Deal program for agriculture.

Another change of considerable magnitude was the appropriation of $378,000,000 in the budget for 1940 for the operation of the social security program: in the 1930 budget this item had not figured. Part of the sum mentioned was used to defray administrative costs; the remainder was disbursed as grants-in-aid to state governments, or was placed in reserve to meet future old-age benefits. In 1940, roughly $300,000,000 were appropriated for the Civilian Conservation Corps and $80,000,000 for the National Youth Administration. Again, the 1940 budget provided an expenditure of about $130,000,000 for the "railroad-retirement account"; that is, for the payment of benefits to retired railroad workers. In 1930 the Civilian Conservation Corps did not exist; nor had aid to youth and the provision of railroad-retirement benefits yet become federal activities. Another major item of increase during the decade was only indirectly connected with a broadening of governmental functions. Interest on the public debt in 1940 was slightly more than $1,000,000,000; in 1930 it had cost but $660,000,000.

One further point deserves notice. Some categories of expenditure introduced during the thirties have disappeared or have since been absorbed elsewhere. The Civilian Conservation Corps and the National Youth Administration are no longer with us. Born of the depression, they seem to have been considered inappropriate to a wartime economy. Other appropriations in the New Deal budgets, such as those for agricultural recovery, social security, and the railroad-retirement benefit plan, originally treated as "extraordinary" expenditures, have since been transferred to the category

of "ordinary" expenditures. The latter change illustrates the process whereby new "extraordinary" functions of government may later assume the guise of regular or normal government activities.

FEDERAL EXPENDITURES IN WARTIME

Modern war is extremely costly. As the resources of the nation became ever more heavily engaged in fighting World War II, federal expenditures rose rapidly, reaching a peak in the fiscal year 1945. Since 1940, budgets of the federal government have listed general or nonwar expenditures and expenditures for war activities so far as possible separately. While figures compiled on this basis fall short of furnishing a true measure of the cost of the war, they are nevertheless illuminating. For fiscal years 1940 through 1946 the totals are shown in Table 20.

Table 20 GENERAL AND WAR EXPENDITURES BY THE FEDERAL GOVERNMENT, FISCAL YEARS 1940 TO 1946

(in billions of dollars)

	1940	1941	1942	1943	1944	1945	1946
General expenditures *	8.4	6.4	6.4	6.1	6.7	10.4	16.5
War activities †	1.5	6.3	26.0	72.1	87.0	90.0	48.5
Total expenditures	**9.5**	**12.7**	**32.4**	**78.2**	**93.7**	**100.4**	**65.0**

* Includes interest on the national debt.
† Includes veterans' services and benefits.

It will be seen that, as a result of expenditures more or less directly attributable to the war, federal outlays in 1945 were more than ten times as high as they had been in 1940. General or nonwar expenditures remained rather stable around six and one-half billion dollars during the war years, but since the close of hostilities have shown a tendency to rise sharply, reaching sixteen and one-half billion for the fiscal year ending June 30, 1946. Estimates for the fiscal year 1950 are $28,000,000,000 for general expenditures (including $5,450,000,000 for interest on the debt) and $20,000,000,000 for war activities, making a total of $48,000,000,000. Thus, although military expenditures (as was to be expected) have fallen drastically since 1945, such outlays still comprise about two-fifths of the federal budget. Meanwhile, general or nonmilitary expenditures have risen to a point where they are roughly three times the prewar level.

Several comments may be made upon these figures. Mainly in consequence of the inflationary character of wartime finance, prices of goods

and services have risen much above prewar levels. In common with the rest of us, the federal government has found that the dollar does not stretch as far as it used to. In part, higher levels of postwar expenditure reflect this fact. But the war has had other effects too, and some of these may be traced among specific items to be found in the budget. In particular, interest on the public debt has increased fivefold, and the cost of the Veterans' Administration tenfold, as a direct result of the war; each item now amounts to around five and one-half billion dollars (Table 21). Another item of a more temporary character has swollen recent budgets: owing to overpayment of wartime taxes, an appropriation of three billion dollars for tax refunds was necessary in 1946.

THE FEDERAL BUDGET IN WAR AND PEACE

It is obvious from this discussion that, in consequence of the war, federal outlays have increased at many points, and that many such increases are of a more or less permanent nature. While it is still too soon to sketch the outlines of a typical postwar budget, some further light may be thrown upon the changes which occurred during the war itself. Table 21 compares federal expenditures for 1939-40 (the last representative peacetime year) and 1944-45 (the year of peak wartime expenditure) with estimated expenditures for 1949-50. Most of the items are self-explanatory, or have already received comment.

In 1944-45 the vast expenditures for "national defense," and for the merchant marine, accounted for nine-tenths of all appropriations. Proposed expenditures for defense in 1949-50 are much lower than during the war but far higher than in 1940. The sharp increase in the item "international affairs and finance" for 1949-50 reflects expenditures proposed under the Marshall Plan to aid Europe. The virtual disappearance of federal expenditures for relief may be noted; also the forthcoming appropriation of large sums for the development of atomic energy. Not only the army and navy, but also the merchant marine, cost far more during the war than they did before or have since. A steady increase can be seen in expenses of "general government," i.e., of the legislative and judicial establishments, and of the executive direction of the government in Washington. The transfers to trust funds on account of old-age and survivors' insurance, as a provision for the future payment of pensions, also grew steadily. In the budget for 1949-50, there was proposed for the first time an appropriation for health insurance.

Table 21 FEDERAL EXPENDITURES AND NET SURPLUS OR DEFICIT, FISCAL YEARS 1940, 1945, AND 1950

(in millions of dollars)

	1940	1945	1950 *
National defense			
Air and army	626	49,958	8,074
Navy	865	30,087	4,674
Other	6	4,485	1,520
Veterans' services and benefits	551	2,094	5,496
International affairs and finance	50	677	6,709
Social welfare, health, and security			
Retirement and dependents' insurance	136	330	726
Assistance to the aged, etc.	662	412	1,227
Work relief and direct relief	2,189	4	2
Other	160	337	402
Housing and community facilities	28	—183	388
Education and general research	64	161	414
Agriculture and agricultural resources	1,574	1,611	1,662
Other natural resources			
Conservation	352	246	1,136
Atomic energy	—	—	725
Transportation and communication			
Merchant marine	98	3,183	185
Other	458	224	1,401
Finance, commerce, and industry	—	106	107
Labor	11	157	187
General government	343	919	1,224
Interest on the public debt	1,041	3,622	5,450
Tax refunds and miscellaneous	83	1,968	2,246
Transfers to old-age trust fund	550	1,310	4,120
Transfers to health-insurance trust fund	—	—	260
Total expenditures	9,847	101,708	48,335
Total receipts	5,937	47,767	47,462
Surplus (+) or deficit (—)	**—3,910**	**—53,941**	**—873**

* Estimate.

The final entries in the table show how in 1944-45, although federal receipts expanded greatly as taxes were increased, they did not expand rapidly enough to cover the vast growth in expenditures. The proportion of expenditure covered by receipts declined from 58 per cent in 1940 to 46 per cent in 1945. The annual deficit, to be financed by borrowing, increased from less than $4,000,000,000 to almost $54,000,000,000. Deficits during the war years raised the federal debt from $43,000,000,000 on June 30, 1940, to $259,000,000,000 on June 30, 1945, and $269,000,000,000 on June 30, 1946. Fiscal year 1947 ended with a small surplus, and fiscal year 1948 with a surplus of more than $8,000,000,000. Deficits of some hundreds of millions of dollars are anticipated in 1949, and, if taxes are not raised, in 1950 also.

PROSPECTIVE TREND OF THE FEDERAL BUDGET

A "typical" federal budget during the prosperous 1920's amounted to approximately two and one-half billion dollars. A typical New Deal budget authorized appropriations of about eight or nine billions. While it is too early to predict with accuracy the size of a "typical" postwar budget for the 1950's, it is certain that annual federal appropriations for years to come will be far above those of the 1930's. The American people should be prepared to carry a "normal" federal budget calling for outlays approximating forty billion dollars. The reasons for this marked change in the level of federal expenditures are clear from the preceding analysis of the functions and of the cost of government. The war has brought to the United States many new responsibilities, domestic as well as international. These responsibilities cannot be effectively met without substantial financial resources. To cite just a few specific examples, there is the annual interest charge of five billion dollars on the national debt. This one item alone is twice the size of an entire "typical" budget twenty years ago. Appropriations for national defense, while far below those of 1944-45, will be the largest single item among federal expenditures (one-fourth of the 1950 budget is appropriated to this purpose). Billions will probably be spent to aid the tottering economies of Europe and Asia. Veterans' benefits and services will consume a large portion of annual appropriations (about one-ninth in 1950), as a regular or "ordinary" form of expenditure.

A great many people are asking whether the American economy can shoulder this heavy burden. Won't this huge cost of government entail a tax burden which the American people and the American economy cannot support? This is not the place to engage in a full discussion of this question,

some specific aspects of which are treated in Chapter 26. But the general principle from which tentative answers to these questions may be derived can be stated here.

The absolute size of the national debt and the absolute per capita cost of government are not the determining factors. The questions raised above turn on the relationship which these magnitudes bear to the total national income. If the national income is maintained at a level at least as high as that which it reached during the war, the ratio of the cost of government or of the tax burden to the national income may not be significantly greater than what it was before the inflation of prices and before the greatly expanded national output brought on by the war. If, on the other hand, the economy should suffer a sharp contraction in production, employment, and prices, the ratio of the tax burden to the national income could rise to a point where it might become a danger. It is encouraging that the estimated gross national product for the calendar year 1948 is $250,000,000,000. It is of vital importance that this value of gross national product be maintained or, better, that it be increased, providing it is an expansion based upon production of goods and not upon inflated money values.

FEDERAL REVENUES

To this point, in discussing the financial operations of the federal government, attention has been confined to expenditures. As already explained, governments, broadly speaking, estimate their expenditures in any fiscal year first, and proceed subsequently to determine how much revenue they need, or how much they will be able to obtain. A study of public revenues, therefore, logically follows a treatment of public expenditures.

Revenues available to governmental units are of four kinds: (1) "prices," or commercial revenues arising from the operation of public enterprises; (2) fees, fines, special assessments, and other so-called administrative revenues which result from the performance of strictly administrative functions; (3) grants-in-aid and subventions, which in a federal system take the form of revenue to one—but expense to another—unit of government, as illustrated by federal appropriations of funds to states for building highways; (4) taxes, by far the most important source of revenue.

The first category, illustrated in the case of the federal government by postal rates and Panama Canal tolls, is seldom an important source of revenue for general budgetary purposes. The reason is that receipts from the activities of a public enterprise are normally pledged to meet its operating costs, and only the surplus (or deficit) finds its way into the general

fund of the Treasury. Some European countries have made large sums out of tobacco and match monopolies, but plans of this sort are, in reality, concealed ways of collecting taxes. The second category, illustrated by court fines and by fees charged for the registration of a patent or the issuance of a passport, are generally unimportant as a source of revenue. An exception is the case of special assessments levied by local governments. Such assessments are made against individual property owners in return for benefits conferred by public improvements, such as paving streets and laying sidewalks. Special assessments are an important form of revenue to local governments, and have occasionally been collected by the United States Treasury in connection with reclamation projects. Federal grants-in-aid have made the third category an increasingly important source of revenue to state and local governments, but the payments are all in one direction, and the federal government does not obtain funds in this fashion. Evidently, so far at least as the Federal Treasury is concerned, revenue must come almost wholly from taxes.

THE NATURE OF TAXES

A tax may be defined as a compulsory contribution from all persons in a given situation, the proceeds of which are used to defray the general expenses of government. Ordinarily the obligation of the taxpayer does not rest upon the receipt of any special benefit, nor are the proceeds from a particular tax earmarked for a particular purpose. Indeed the Constitution provides that taxation shall be for the *general* welfare, and this provision has been held to preclude the earmarking of federal revenues. However, employment taxes and highway taxes (to be discussed below) afford partial exceptions to this rule, for a major portion of the revenue from each of these levies is used to provide benefits to a particular group of taxpayers. Yet such cases may be regarded as exceptional. Most taxes are imposed without reference to special benefits conferred, and their proceeds are devoted to general budgetary needs.

In this connection it is helpful to compare taxes with special assessments. These levies are alike in that both are compulsory, the proceeds from both are used for a public purpose, and both, constitutionally, are founded upon the taxing power. The differences between them are no less significant. Since a tax may fall upon anyone, the taxpaying obligation tends to be universal, whereas special assessments are levied only upon those owners whose property is adjacent to the improvement. Again, different considerations govern the levy of a tax and a special assessment. In the latter case

special benefit is the paramount consideration. In the case of a tax, ability to pay—rather than any benefit derived—is the principal standard.

THE VARIETIES OF TAXES

Taxes are commonly classed as direct or indirect, according as they are assessed upon income receivers or property owners in general on the one hand, or upon the production, importation, or consumption of particular goods and services on the other. Direct taxes include taxes on incomes and property, estate, inheritance and gift taxes, and poll taxes. Indirect taxes comprise customs duties, automobile licenses, excise taxes on items such as liquor and tobacco, and sales taxes.

Taxes on property, poll taxes, automobile licenses and sales taxes are levied almost exclusively by state and local governments. During the nineteenth century state governments satisfied their needs for revenue mainly from the general property tax, but within recent decades they have collected large sums from the taxation of automobiles and gasoline, and many states have also imposed sales and income taxes. The collection of customs duties is the exclusive prerogative of the federal government, and for a long time was its main source of revenue. By 1913 excise taxes on liquor and tobacco had also taken an important place in federal revenues, but not until the passage in that year of the Sixteenth Amendment to the Constitution could the federal government impose income taxes. The federal income tax is now by far the most important source of revenue to the United States Treasury. The growth in revenue from direct taxes has placed a relatively heavier burden upon the well-to-do, and represents an increasing recognition of the principle of ability to pay.

The extent of the shift from indirect to direct taxation is clearly shown by further analysis of the federal revenue structure. In 1913 customs duties accounted for about one-half, liquor taxes for about one-third, and excises upon tobacco for about one-tenth of all federal revenues.[1] In 1930 indirect taxes supplied slightly less than one-third of the total, due partly to the loss of liquor excises during Prohibition, but principally to the addition of the income tax, which provided two-thirds of all federal revenues in that year. The shift in emphasis from indirect to direct taxation was carried still further by the need for additional revenue during World War II, and the flexibility and responsiveness of the income tax to this need. During the

[1] All "years" referred to here are fiscal years. The federal government's fiscal year is the twelve-month period ending June 30 of the year indicated.

fiscal year 1947 personal and corporate income taxes contributed more than three-quarters of all federal tax revenues; personal income taxes contributed slightly less than one-half. Excise taxes on liquor, tobacco, gasoline, and many luxury items accounted for one-eighth of total revenues—customs duties for less than 1 per cent!

The broad recognition given to the principle of ability to pay—as manifested by the growth of revenues from federal income and estate taxes, and by the introduction of income-tax laws in numerous states—has been somewhat modified by a return in some cases to heavy taxes on consumption. Such taxes have, in many states, taken the form of sales taxes, and, in the case of the federal government, of special wartime taxes on furs, jewelry, cosmetics, railroad travel, and telephone and telegraph communication.

FEDERAL REVENUES IN RECENT YEARS

Table 22 analyzes federal revenues for the fiscal year 1940, the most recent representative peacetime year; for 1945, the wartime year in which revenues—like expenditures—reached a peak. It also includes estimated revenues for 1950. This table is comparable with, and complementary to, the

Table 22 FEDERAL REVENUES, FISCAL YEARS 1940, 1945, AND 1950

(in millions of dollars)

	1940	1945	1950 *
Individual income taxes	982	19,034	19,135
Corporate income taxes [1]	1,281	16,399	12,252
Employment taxes (social security)	834	1,779	5,284
Estate and gift taxes	360	643	653
Alcoholic beverages	624	2,310	
Tobacco	608	932	
Stamp duties	39	66	7,900
Manufacturers' and retailers' excise taxes [2]	447	1,207	
Miscellaneous internal revenue [3]	148	1,430	
Customs duties	349	355	407
Other receipts [4]	265	3,612	1,831
Total revenue	**5,937**	**47,767**	**47,462**

* Estimate.

[1] Including capital stock and declared-value excess profits taxes.

[2] Includes especially taxes on gasoline and lubricating oils; and in 1945 and 1950 special taxes on furs, jewelry, cosmetics, and numerous other luxuries.

[3] Includes especially taxes on theater admissions; and in 1945 and 1950 special taxes on railroad travel, telephones, and telegraphs.

[4] Includes nontax revenues; in 1945 consisted mainly of funds recovered through the renegotiation of war contracts.

table already given for federal expenditures. Wartime changes are readily observed. The expanded yield of income taxes to roughly fifteen times prewar affords a striking demonstration of the flexibility of this source of revenue. The expansion was due partly to higher rates and partly to wartime inflation of incomes. The item for corporate income taxes includes in 1945 the yield of wartime excess-profits taxes. In 1945 practically all other taxes yielded somewhat more than they had in 1940, but the increase is most striking in the case of alcoholic beverages, the rates on which had been raised sharply. As explained in footnotes to the tables, the increased receipts from "manufacturers' and retailers' excise taxes" and from "miscellaneous internal revenue" came largely from a whole series of wartime consumption taxes levied upon a wide variety of luxuries and semiluxuries. The estimates for 1950 are those given in the President's annual budget message. The yield from individual income taxes is expected to increase still further, but owing to the repeal of excess-profits taxes revenue from corporate income taxes has already fallen sharply from its wartime peak.

THE AMERICAN TAX SYSTEM

To this point the present chapter has concentrated upon federal expenditures and revenues in peace and war because the United States Treasury is by far the most important fiscal agency in the nation. Remarks about state and local finance, and about problems of public finance in general, were necessarily incidental. The remainder of the chapter will be devoted to the characteristics of different taxes, and of the American tax system as a whole.

Altogether about fourteen billion dollars was raised in tax revenues in the United States in 1939. The largest share, about 40 per cent of the total, was federal revenue, with the states sharing about 28 per cent of all collections. The remaining 32 per cent was collected by cities and other local units. In the war years federal revenues rose rapidly, as we have seen; state and local revenues remained comparatively stable. In consequence the federal share of total tax collections for years since 1939 rose sharply, and the share of state and local governments declined correspondingly. Nevertheless, even with a further development of federal grants-in-aid, state and local taxes are likely to remain the main source of revenue for meeting state and local needs. Some of these taxes will be described below.

TAXES ON PROPERTY

Property taxes supply about two-fifths of state and local revenues. The states derive only 4 per cent of their revenues from such taxes, but local units depend heavily upon them. The federal government levies no property tax. Because the levy is usually assessed against all real and personal property owned by the taxpayer (except certain exempt items), it has become known as the general property tax. Its justification rests upon the assumption that ownership of property accurately reflects ability to pay taxes. This assumption is perhaps less readily justified than the corresponding assumption in the case of taxes upon income, goods produced or consumed, or other evidences of wealth involving a flow of money over a given period of time. In extreme cases a property owner may have little or no cash income, and may be forced to borrow or to sell part of his property to pay the tax.

During the depression of the thirties the relation, in general, between the possession of property and the receipt of cash income out of which to pay the property tax was such that numerous delinquencies occurred. Among other defects, the general property tax is not graduated, but is levied at a uniform rate, no matter how valuable the property, or how wealthy the owner. It has frequently led, also, to competitive undervaluation among local communities and has encouraged tax evasion and dishonesty. Concealment of certain kinds of personal property, particularly intangible claims to income, has been a common practice. The impossibility of enforcing the tax effectively has led to reforms in many communities, such as the assessment of lower rates upon personal than upon real property. At best such reforms have afforded only a partial solution to the problem.

INCOME TAXES

The levy on personal and corporate incomes has displaced the property tax as the prime source of revenue in the modern state. The receipt of income, unlike the possession of property, guarantees the availability of cash resources with which to pay the tax. Because of this, the problem of delinquency is unimportant, while the tax can be brought closely in line with ideas about ability to pay. Disputes about the valuation of property are avoided. Moreover, evasion can be rendered difficult by such devices as the collection from employers of data showing amounts of wages and salaries paid by them to specified individuals during the year. On the other

hand, in the case of political units which are geographically small the business of collection is complicated by the receipt by residents of income from outside the area, and by the origin within the area of income paid to nonresidents. Partly for this reason, the use made of the income tax by the three layers of government is precisely the reverse of the use made of the property tax. The federal government makes great use of the income tax and none of the property; in the case of local governments the opposite is true. About two-thirds of the states have adopted the income tax in some form but do not rely heavily upon its yields. Total revenues from state income taxes were about $350,000,000 in 1939, or only one-sixth of the yield of the federal income tax in that year. In 1948, total income tax (personal and corporate) collections of the federal government were over $31,000,000,000; total state income tax collections were $1,070,000,000 or about one thirty-eighth of the federal.

The fact that income taxes are assessed according to a highly specialized definition of *net* income does not materially diminish their conformity to the criterion of ability to pay. Expenses involved in obtaining the income and any losses incurred by the taxpayer are deductible, as are charitable contributions, medical expenses in excess of a defined minimum, and some (but not all) taxes paid by the income receiver. In addition the taxpayer may deduct a lump sum which varies with the number of his dependents. The tax is then assessed upon the balance. The provisions just summarized refer to the federal personal income tax. The calculation of the income tax payable by a corporation, and assessed against its net profits, is much more complicated. The corporate income tax makes no distinction between income belonging to the well-to-do and to the poor stockholder and is therefore inferior to the personal income tax on the score of ability to pay.

Rates of tax on personal incomes are progressive. The federal rates on 1945 incomes were graduated from 23 per cent on the taxpayer's initial $2,000 of taxable net income to 94 per cent on that part of his net income in excess of $200,000. The 1948 rates ranged from 16.6 to 83.13 per cent. The federal income tax on corporations is also graduated in the case of net incomes up to $50,000: for 1948 corporations with profits in excess of $50,000 paid a flat 38 per cent.

OTHER TYPES OF PUBLIC REVENUES

Employment taxes. The federal employment or pay-roll taxes, levied as part of the old-age benefit and employment-compensation program of the Social Security Act of 1935 were described in Chapter 18. Although

the funds collected and disbursed appear in the accounts of the Federal Treasury, the collections may more properly be regarded as compulsory insurance premiums than as taxes.

Sales taxes. The use of sales taxes has undergone considerable expansion in the United States since 1930. Of the many forms of sales taxes, that most commonly in use today is the tax levied at a uniform rate on retail sales of goods and services. Exemptions are sometimes provided for certain essentials of life, such as food. Nevertheless, sales taxes have been criticized, in common with many other indirect taxes, on the ground that they do not take into account capacity to pay. It would be unusual for a person with $20,000 a year to buy ten times as much of the articles taxed as a person with $2,000 a year; hence the latter is likely to contribute a larger percentage of his income in sales taxes than the former. It has been further argued that such taxes are tiresome to collect and frequently evaded.

In 1948, twenty-seven states and many cities were levying sales taxes of one type or another. The aggregate revenue supplied to the states from this source amounted to $1,500,000,000 in 1948, or substantially more than the yield from state income taxes in that year. All told, sales taxes provided about 12 per cent of total state and local tax revenues. The proposal that Congress enact a general manufacturers' sales tax, administratively the most feasible kind of federal sales tax, has not been seriously entertained since 1932, although the scope of federal excise taxes on individual commodities was greatly expanded during World War II.

Liquor and tobacco taxes. Among indirect taxes common to most countries of the world and long sanctioned by tradition are duties on liquor and tobacco. Along with other indirect taxes, they take slight notice of the principle of ability to pay, although it may be claimed that the individual who can afford to drink or smoke can also afford to bear taxes. Whether or not the commodities concerned may truly be considered luxuries (tobacco is sometimes called a "conventional necessity"), the real justification in the public mind for heavy taxes on liquor and tobacco undoubtedly lies in the notion that—as a people—we drink and smoke quite enough as things stand. The implication is that, if these two commodities were not taxed, we should consume more of them than would be good for us. In line with this thought, beer and wine are taxed at lower rates than distilled spirits. Federal revenue from these taxes is very substantial, although it does not compare with the yield of the income tax. In 1948 federal taxes on alcoholic beverages produced over two billion dollars. The states also tax liquor, and in 1948 derived $500,000,000 from this source. The federal government taxes manufacturers, whereas the states collect their liquor taxes from wholesale and

retail dealers. Several states—e.g., Virginia and Vermont—have chosen to monopolize the retail distribution of liquor. Federal taxation of tobacco yielded over a billion dollars in 1948. At present, thirty-nine states have tobacco taxes, which are a recent development in the field of state taxation.

Highway taxes. The construction of the extensive highway system of the United States has been financed for the most part by special taxes and license charges—especially gasoline taxes and annual registration charges collected from owners of motor vehicles. Each of the three levels of government makes use of one or other of these. The federal government taxes gasoline, lubricants, and automobile parts, but has no motor-vehicle tax (except in the District of Columbia). All states levy gasoline and registration taxes, and even some local units tax the sale of gasoline. The taxation of gasoline in New York City is part of the general city sales tax. The reproach that as indirect taxes they fail to conform to the principle of ability to pay is met by the claim that the proceeds from these taxes have been used predominantly to benefit road users. This claim has been weakened somewhat of late years by the tendency to divert the revenues in question to meet general budgetary needs instead of highway construction and maintenance. Federal yields from the gasoline tax amounted to $479,000,000 in 1948, and state and local collections to around $1,370,000,000 in the same year. This made the gasoline tax in 1948 the largest revenue producer of any tax in the country levied upon a single article. At present, taxes on liquor—as has been said—yield revenues to the federal government second only to the income tax.

Death duties and gift taxes. The tax on transfer of property at death is a very old method of raising revenue but, like the income tax, its general use is of fairly recent date. Besides the constant search for new and fruitful sources of revenue, the rapid growth of taxes on estates passing at death is attributable to increasing skepticism as to the social usefulness of perpetuating large fortunes, the growth of democratic ideas, and above all the general acceptance of the ability-to-pay doctrine in taxation. In addition to producing revenue, death taxes invest the government with a measure of control over the disposition of large accumulations of wealth.

There are three forms of death duties, two of which are levied on the transfer of property after death and the third on gifts made by a living person in anticipation of death. The first two are commonly described as the estate tax and the inheritance tax. The former is levied on the value of the decedent's estate as a whole and is the type used by the federal government. The inheritance tax, by contrast, is levied upon the share received by each beneficiary. The latter tax is imposed by most states, although some

states have adopted both forms. Estate and inheritance taxes are analogous to the property tax in that the tax is based upon the capital value of property, but they resemble the income tax in that the rates levied against estates and inheritances are steeply graduated. In the case of the inheritance tax, the progressive principle is applied both to the magnitude of the bequest and to the degree of relationship which the beneficiary bears to the decedent. A bequest to a collateral heir or a friend is taxed at a higher rate than one to a near relative. Furthermore, exemptions tend to be lower in the former case.

Although the transfer of property at death is regulated by state rather than federal laws, the states collectively derive less revenue from taxing such transfers than does the federal government. The states collected in 1948 about $190,000,000 from this source, as compared with about $822,000,000 collected by the federal government due to the higher rates levied by the latter. The maximum federal rate is 77 per cent on that part of the estate above $10,000,000, with deduction of state inheritance taxes from the federal tax permitted up to a maximum of nearly 16 per cent of the federal assessment.

The purpose of the gift tax is to prevent wholesale avoidance of death duties. The yield of the federal tax on gifts is relatively small, but has been larger than expected. The federal rates are three-quarters of the corresponding estate-tax rates. In recent years the states have turned increasingly toward the taxation of gifts. In 1937 three states imposed gift taxes; by February 1949 the number had increased to twelve.

Customs duties. Taxes on the importation of commodities from foreign countries constitute the second of the two major forms of indirect taxation. The other form—excises or internal taxation of selected commodities—has been referred to above. While states, as well as the federal government, are empowered to levy excise taxes on domestically produced articles, the federal authority under the Constitution is given the exclusive right to tax imports. No unit of government can impose taxes on exports, although export bounties are permitted under the Constitution and have had some application within recent years in the case of agricultural products.

Import duties are listed in a "tariff schedule," a complicated and elaborate document with a bewildering variety of commodity classifications, each with its own special rates. Articles on the "free list" are admitted without being taxed. Some imports are taxed with revenue as the sole motive, but many customs duties are imposed mainly for the purpose of discouraging the importation of the commodities concerned. In the latter class are

to be found duties which are so high as to prohibit certain imports altogether. It will generally be found on investigation that such duties were imposed in response to pressure on the part of domestic producers of the commodities in question or of substitutes for such commodities. Because so many different producing groups and sections of the country want to be protected from "foreign competition" the business of tariff-making has become the classic example of the practice known as "log-rolling." Still other customs duties are about equal to existing taxes on domestically manufactured goods, and are designed to avoid penalizing the domestic producer through the free entry of foreign-made articles. This is the case, for example, with a part of the import duty on liquor.

Customs duties are one of the oldest forms of tax. In the early days of the republic the Treasury depended for revenue almost entirely upon such duties. They have gradually fallen in importance, relatively speaking, as the needs of the federal government have grown and as newer sources of revenue have developed. In 1939 customs duties yielded about $310,000,000, or roughly 6 per cent of aggregate federal tax revenues. By 1946 the yield had increased to $435,000,000, but the share of customs duties in federal revenues had declined to around 1 per cent.

Miscellaneous taxes. The forms of taxes described above are the main supports of the American tax system, supplying among them more than nine-tenths of aggregate federal, state, and local tax revenues. The small remaining portion of the annual flow of tax receipts collected in the United States comes from miscellaneous taxes, none of which can claim to be a major type. Most productive among the miscellaneous federal taxes are those levied upon commodities regarded as luxuries or semiluxuries. Taxes are also levied, more for regulation than for revenue, on a number of products, such as narcotics and adulterated foods, whose consumption is considered harmful to the community.

States, as well as the federal government, derive some revenue from miscellaneous sources. Special taxes on business are fairly common, the most typical being taxes on chain stores, insurance companies, and general capital stock. Several states levy a special tax, known as a "severance" tax, on any business, corporate or otherwise, engaged in extracting oil, gas, coal, or other minerals from the earth or in cutting timber.

By and large, state tax systems are more varied in character than are those of local government units. In fact, states can be found which use every important tax employed by the federal government except customs duties, and many draw revenues from the property tax besides. The prin-

ciple of progression is applied more widely by states than by local units owing to the heavy dependence of the revenues of the latter upon the local property tax which does not lend itself to progression. As for the structure of our tax system—federal, state, and local—and the effects of various kinds of taxes contained in that structure, attention will be given to these matters in the following chapter.

CHAPTER TWENTY-FIVE

Our tax system

ANALYZING THE TAX BURDEN

In Chapter 24 we considered the principal sources of revenue upon which federal, state and local governments depend, and observed the changes that have occurred over the years in the relative yields of these sources. Most striking, perhaps, has been the shift of emphasis in federal revenues from indirect to direct taxes. In this chapter we shall take account, in a somewhat more systematic manner, of the advantages and disadvantages of various taxes. We shall also discuss the problem of integrating many different, and sometimes conflicting, levies into a single tax system designed to furnish governmental units at each level—federal, state and local—with the amounts of revenue which each needs or deserves. Of course we cannot judge the desirability of imposing an additional or repealing an existing levy, unless we know in the one case what the new revenue will be used for, or in the other what branch of expenditure will be contracted. The "burden" of taxation is not something which can be neatly dissociated from the benefits which accrue to the community through the spending of the revenues raised. Yet we can best study the ways men have thought about tax problems if we imagine that some definite amount of revenue is needed, and then study the distribution of the tax burden when various alternative methods are used for obtaining the proposed revenue.

We speak of the "burden" of taxation because nobody likes to pay taxes. If a man pays money in taxes, he has less money available for other purposes: for living expenses, for luxuries, or for saving. To him the burden of paying taxes consists of the things which he is forced to go without. In addition to depriving the taxpayer of income, taxes may have other and more complicated effects. For one thing, they may be shifted, through

changes in prices, so that they are borne by persons quite other than those upon whom they were originally assessed. For another, taxes may cause people to behave quite differently than they would otherwise do—for instance, to work harder or to work less hard. Some of these further effects will be considered below.

THE INCIDENCE OF TAXES

It is important to realize that many taxes may be, and normally are, shifted from the person upon whom they are assessed to some other person. Such shifting results from the ordinary, everyday operation of the market. As a simple illustration, consider the case of a tax of four cents a gallon imposed on gasoline which formerly sold for twenty cents a gallon. Suppose that the tax is collected from the seller of gasoline. In the unlikely event that he absorbs the whole of the tax, and continues to sell gasoline for twenty cents a gallon, then the burden is borne wholly by the seller. More probably he charges the consumer a higher price for gasoline, say twenty-two cents a gallon. In that event, he has shifted two cents of the tax to the consumer; buyer and seller share the burden, although the whole tax (four cents a gallon) continues to be collected from the seller. In an extreme (but not unlikely) case the seller may raise the price by the full amount of the tax, charging the consumer twenty-four cents a gallon; in that case the entire tax would be shifted forward to the consumer. The amount of tax borne by the consumer is measured by the rise in the price he pays.

In this matter of the shifting of taxes, both buyers and sellers are subject to the stern compulsions of the market. The incidence of a particular tax is far from being an arbitrary or accidental matter. Anyone upon whom a tax is assessed would always like to shift it to somebody else. Whether or not he succeeds in doing so depends simply upon his situation in the market. If his bargaining power is strong, he may succeed in shifting the tax; if it is weak, he will have to bear the burden, or most of it. Statistics tell us only the persons upon whom taxes are assessed, or from whom they are collected. In discussing the distribution of the tax burden, we obviously must take account also of the possibility that those persons who pay taxes shift the burden to others.

The subject of shifting and incidence of taxes is an extremely complicated one, and we cannot hope that any useful generalizations will be completely accurate. However, it is approximately true, and it will be a sufficient guide for the ensuing discussion, to say that direct taxes are borne by the people upon whom they are assessed. Direct taxes include income

estate, inheritance, and poll taxes. To say that such levies cannot be, or are not in practice, shifted is to say that an employed person, for instance, cannot ordinarily induce his employer to pay his income tax for him, i.e., cannot induce his employer to pay him a larger wage or salary for the reason that he must part with some of his earnings to the Treasury. The employee's income tax could be shifted to the employer, and so to the latter's customers, only if workpeople showed a tendency to withdraw their labor on account of the tax, but workpeople do not ordinarily react in this way. Indeed, even where an employee's income taxes are collected from an employer (by pay-roll deduction), they continue to be paid by the employee. The argument outlined in the case of a tax on wages and salaries applies without essential modification in the case of taxes upon other kinds of income. The basis for this general conclusion is simple: it is that a person's income usually is as high as he can conveniently make it, and that the imposition of an income tax does not, in itself, add anything to his power to secure income.

The other principal class of taxes—indirect taxes—tend to be borne by the ultimate consumer of the article upon which they are imposed. Such levies include customs, excises, and sales taxes. The tendency for the consumer to pay the tax operates no matter from whom the tax is collected. That is to say, if the commodity is taxed in the hands of the manufacturer or distributor, he will sooner or later shift most or all of the tax forward, in the shape of an enhanced price for the commodity, until it reaches the ultimate consumer. Why is the producer able so to shift the tax? The answer is that he commonly can find another occupation for his talents and his capital, and that therefore he will not continue to produce or to market the article taxed unless the buyers pay the tax.

These facts enable us to make the rough and ready generalization: direct taxes tend not to affect prices of commodities, and so tend to be borne by the person upon whom they are assessed; but indirect taxes tend to raise prices and so to be borne by the ultimate consumer of the commodity taxed. This is, in fact, why we call them "indirect."

THE DISTRIBUTION OF THE TAX BURDEN

The most important social and economic effects of taxation center upon the distribution of the tax burden. For judging the appropriateness of this burden two sometimes conflicting criteria have been proposed: (1) justice (sometimes called equity), and (2) efficiency (sometimes called economy). Every legislature and every Secretary of the Treasury must pay attention

to each of these principles. Every tax bill seeks to interpret them, and—if necessary—to effect a compromise between them.

The principle of justice requires that persons similarly situated shall be asked to pay the same amount of taxes. This really amounts to saying that assessments shall not be arbitrary—as they often were in early modern times, when the right to collect taxes was "farmed out" to a royal favorite or sold to the highest bidder. The principle of justice further requires that, where different persons are asked to pay different amounts of taxes, the taxpayers shall differ in *relevant* respects. That is to say, it is reasonable to ask A to pay more taxes than B, provided A smokes more or has a larger income or has fewer dependents, than B. But if A is merely taller or wiser or more handsome than B, these would not be regarded as adequate reasons for asking A to pay more taxes than B. Just what differences between A and B are relevant, and how much more taxes justice requires that A should pay than B, or B than A, on account of these differences—such questions plainly are extremely complex. They have often provoked the liveliest debate.

The second criterion mentioned, the principle of efficiency, requires that taxes should do as little damage as possible to productive activity. Taxes should be so assessed that they do not cause people to change their behavior—for example, to work less hard. Taxes which discourage investment would also infringe this principle.

THE CRITERION OF JUSTICE IN TAXATION

Among various possible ways of interpreting the idea of justice in taxation, two have attracted considerable support. These are known as the "benefit" and "ability" doctrines respectively. Each rests upon a different conception of the individual's rights and duties in relation to the community at large.

Benefit as a standard of justice. According to the benefit theory, each taxpayer should contribute to the public revenue an amount corresponding to the benefit he derives from the services furnished by the state. This view was generally held during the seventeenth and eighteenth centuries. The payment of taxes in return for the services of government was regarded as a commercial exchange or bargain; each party—the taxpayer and the state—gave the other a *quid pro quo*. It is clear that this viewpoint accords well with the individualistic theory of social organization, epitomized in the idea of the social contract, and with the doctrine of natural rights.

On the other hand the inadequacy of the principle of benefit as a general method of assessing taxes in a modern society is rather clear. In the va

majority of cases it is quite impossible to determine the value of governmental services to individual taxpayers. Such services are sold in no market, and frequently benefit people in general rather than specific individuals. We need think only of the defense services, the maintenance of courts of law or the provision of highways. Who is to say that Mr. Jones gets more benefit than Mr. Smith from the services of the Coast Guard? Who shall say whether Mrs. Green, whose little boy is saved from the wheels of a truck, or Mrs. Brown, whose stolen pearls are returned to her, owes more to the police force, and should make the larger contribution to its upkeep?

The difficulty or impossibility of measuring benefits is not the only objection to this doctrine as a general method of assessing tax liability. Many public services, such as schools and hospitals, tend to be used more by the poor than by the rich. Under the benefit doctrine, therefore, a poor man would be more heavily taxed than a wealthy man. This is scarcely a result that would arouse widespread public approval today. At a time when the government did little for the poor, the benefit theory perhaps was a more appropriate guide to public finance than it is at present. Currently its application is restricted to the use of motor vehicle taxes to finance the building of highways, and the levying of special assessments on adjacent real estate to finance street paving or other local improvements that enhance the value of property served by the improvement.

Of course we might adopt a modified version of the theory, based upon the difficulty of measuring benefits. We might assume that everybody benefits equally, and assess everybody the same amount. This is what is called a "poll tax." Yet such a levy also would fail to accord with modern ideas of justice. For the rich man would scarcely notice a tax that bore heavily upon the poor man.

In fact the entire idea of an implied contract between the individual taxpayer and the state, whereby the latter performs specific services for the former, is somewhat out of line with modern ideas. Probably most of us find it easier to think of tax liabilities as originating in a common social obligation and a sense of social solidarity than in measurable personal benefits to be bought and paid for by each one of us.

Ability to pay as a standard of justice. The most popular conception of justice (or equity) at the present time demands that taxes should be levied according to ability to pay. This doctrine, as interpreted by federal and state legislatures, in fact underlies much of our present tax structure. It also is a doctrine with antecedents in the eighteenth century. In the first of his four canons (or principles) of taxation, Adam Smith declared that "the

subjects of every state ought to contribute toward the support of the government as nearly as possible in proportion to their respective abilities; that is, in proportion to the revenues which they respectively enjoy under the protection of the state." This principle seems clear enough, and would be fairly simple to apply if we were secure in our knowledge of what "respective abilities" are and if we were positive that "proportional revenue" accurately reflects capacity to pay.

DIFFICULTIES OF MEASURING ABILITY TO PAY TAXES

Many answers have been offered to the question, "What determines an individual's capacity to pay?" For instance, John Stuart Mill attempted to work out a subjective measure of ability which he called "equality of sacrifice." A fair distribution of the tax burden would involve "a contribution from each person so that he shall feel neither more nor less inconvenience from his share than every other experiences from his." More modern students of this subject have taken their cue from Mill and have tried to construct a rule of taxation on the basis of "equality of sacrifice between individuals"; others have urged "proportional sacrifice," or even "least aggregate sacrifice" for the entire community, as the proper basis for assessment.

With *equality of sacrifice*, it is obvious that all persons (or at least all persons with incomes) would be taxed, however poor they chanced to be. There would be no exemption, however small might be a person's income. On the other hand, if we assume that a dollar of expenditure in general yields less satisfaction to a man with a large income than to a man with a small income, equality of sacrifice would require the payment of a larger tax by a rich man than by a poor man. Larger—but how much larger is quite uncertain. Equality of sacrifice might or might not require progressive taxation, i.e., the assessment of large incomes at a higher percentage rate than small ones.

Proportional sacrifice means sacrifice in proportion to benefits derived from a given income. Such a plan would require a larger sacrifice from the man with a bigger income—larger in proportion to the greater satisfactions derived from the bigger income. The calculation of satisfactions and sacrifices gets ever more complex. Let us still assume that the more dollars a man has, the less he prizes each of his dollars. In that case a flat percentage tax on all incomes might involve a smaller sacrifice from the man with the bigger income—depending upon how much less he prizes his dollars. But a flat percentage would almost certainly not involve a sacrifice from the

wealthy commensurate with the greater satisfactions they derive from their bigger incomes. Therefore we can feel some confidence that proportional sacrifice would require progressive rates of taxation.

With the same assumptions, the third principle mentioned—that of *least aggregate sacrifice* for the community as a whole—leads to quite different results. As long as a dollar of income is worth less (in terms of the satisfactions it yields) to a man with many dollars than to a man with few, least aggregate sacrifice requires that all taxes be paid by the wealthy. In fact, no one would pay any tax until all incomes larger than his had been reduced by taxation to his level.

The tremendous complications involved in trying to establish any systematic—not to say objective—interpretation of ability to pay are now apparent. The principal factors in the case can be set forth in a series of related propositions: (1) Even if we agree that justice requires the assessment of taxes in accordance with ability to pay, we still have to decide how sacrifice is to be related to the satisfactions (income or wealth) that potential taxpayers are currently enjoying. (2) If we resolve the first dilemma, for instance by deciding with Mill that ability to pay involves equality of sacrifice, we still have to decide how much sacrifice the payment of a dollar in taxes means to different individuals. (3) In fact, all such worthy attempts to place the assessment of taxes upon an objective basis have broken down, the reason being that sacrifice and ability to pay are subjective concepts, and cannot be accurately measured by the tax collector. (4) Taxes actually are assessed by legislative bodies, which never have worried unduly about the finer points involved, but which adopt the popular ideas of the day as to what is "fair," and translate these ideas in rough and ready fashion into tax legislation.

INCOME AS A TAX BASE

Many different types of taxes can be brought within the scope of the ideas outlined above. For instance, taxes are imposed upon theater tickets, leather goods, jewelry, and other so-called luxuries at least in part because persons who afford luxuries are thought to be able to afford also to support the state. The receipt of capital gains and of inheritances has been regarded as evidence of ability to pay, and these items have therefore been taxed. The possession of property has likewise been thought to indicate ability to pay. Yet modern legislatures have come more and more to regard the receipt of income as the best test of an individual's ability to pay taxes.

Although—as already demonstrated—there are no objective criteria for judging exactly how much justice requires that a man with a given income should pay, agreement has been reached upon certain broad principles in drafting income-tax laws. Two of these principles, reflected in the income-tax laws of most nations, may be cited by way of illustration. First, a bachelor with an annual income of ten thousand dollars is considered to have a greater capacity to pay than a man supporting a family of five on the same income. Therefore the taxpayer is allowed to deduct varying amounts, according to the number of his dependents, in computing his "taxable income." Second, and equally well accepted, is the principle of progression, whereby a large income not only pays more, but pays more than proportionately more, than a small income. Of the taxable income, that is to say, the percentage paid in tax increases as the taxable income increases.

Of course, agreement upon these two principles still leaves unsettled questions as to how large the exemptions for dependents should be, and how rapidly the tax rate should increase as we go up the income scale. These questions have been answered differently by different governments at different times. In 1948 our federal income tax allowed exemption of the first $600 of the taxpayer's income, and an additional $600 of his income for each dependent. The tax paid upon the remainder, or taxable income, increased from 16.6 per cent upon the first $2,000 to between 82 and 83 per cent of any amount over $200,000. The rate of progression in the federal income tax is therefore rather rapid. Yet the figures just quoted give a somewhat exaggerated idea of the degree of progression. It is true that a person with a taxable income of $300,000 will pay a tax of $82,127 (i.e., between 82 and 83 per cent) upon that *portion* of his income lying between $200,000 and $300,000. Yet, owing to the lower rates which apply to the portion of his income falling below the $200,000 level, his entire tax will amount to $221,387, or between 73 and 74 per cent of his $300,000 taxable income. This is still, of course, a rapid rate of progression.

THE CRITERION OF EFFICIENCY IN TAXATION

Practically every tax will cause some people to behave differently than they would if the tax were not levied. A tax on tobacco will cause people to smoke somewhat less. An income tax may cause people to consume less, or to save less, or both; it may also influence their attitude toward work. In the latter respect its influence is uncertain: heavy taxes on earnings may discourage people from earning (they may just feel disgusted), or such taxes may spur them to greater efforts (they simply cannot make ends meet

on their reduced incomes). Of course many people have no opportunity to vary the amount of work they do, and consequently the amount of income they receive in return. Either they work the number of hours a week, or days a month, prescribed for the particular job, or they must resign or be dropped. Yet many other people—salesmen, professional men, miners, farmers, and many persons working on their own account—can and do vary the intensity of their effort or the hours which they work. How they will respond to changes in income tax rates cannot be predicted in advance. The British found out recently that their coal miners would raise more coal if they were taxed less. But this relation does not always hold.

Enough has now been said to indicate rather clearly that taxes have an important influence upon the way the economic system operates, and upon the kinds and amounts of things produced. Here again we may observe briefly how opinion has evolved. During the eighteenth and much of the nineteenth century, under the influence of the doctrine of *laissez faire*, those taxes were favored which had the least possible effects upon the economic system, i.e., were least likely to cause the taxpayer to behave differently than he would do, were he not taxed. Put otherwise, those few taxes which cannot be shifted, but which must be paid by the persons upon whom they are assessed, were thought to be most desirable. The ideal tax, from this viewpoint, would be the poll tax, i.e., a tax assessed upon all individuals at the same rate. Since no possible change in anyone's behavior could lessen his tax burden, economic activity would proceed exactly as before.

The conflict between efficiency and justice is at once apparent. We have seen that different people are differently situated with regard to income, number of dependents, and so forth. Obviously a poll tax would not conform with the criterion of ability to pay. For this reason those who upheld the doctrine of *laissez faire* never seriously urged that poll taxes should be made a main source of revenue. But they did urge the levying of taxes upon the rent of land, for their analysis suggested that such taxes—like poll taxes—could not be shifted. Henry George was the best-known American to adopt this position, although his reasoning also involved other considerations not mentioned here.

TAXATION AS A METHOD OF CONTROL

Today we are perhaps less concerned to implement the doctrine of *laissez faire* in all its pristine purity. Certain taxes are even levied *because* they interfere with the working of the economy. We need only think of the duties on liquor and tobacco, deliberately intended to cut the produc-

tion and consumption of these commodities. Examples are numerous of taxes imposed with a regulatory intent. The history of the tariff is the story of the use of taxation to discourage the importation of goods which compete with domestic products. That some taxes imposed with regulatory intent lead to economic inefficiency is easily demonstrated, perhaps most easily in the case of those protective duties which, by shutting out foreign products, keep alive an inefficient or monopolistic domestic industry.

Yet when we talk today of the effects of a given tax system upon economic efficiency, we commonly have in mind a somewhat wider frame of reference. We have in mind, that is to say, the effects of the tax system, not upon the incentive to produce or consume some specific commodity, but upon productive activity in general. For taxes, and the manner in which they are imposed, may affect both our productive capacity and the use which we make of that capacity. Taxes exert their influence in this regard through their effects upon the desire of individuals (1) to work, and (2) to invest. Although numerous taxes may have such effects, discussion of the influence of the tax system upon economic efficiency has occurred chiefly in relation to the federal income tax.

The possible effects of the imposition of a tax on incomes, or of a rise in the rates at which an existing income tax is levied, have already been indicated. Whether people feel inclined to work harder or less hard depends upon their individual psychology. The extent to which they are able to alter their productive activity depends upon the degree to which individual employees can control their hours of work. Despite the fact that most Western countries now have many decades of experience with the taxation of incomes, the actual effects of these taxes upon the amount of work that people do has never been accurately determined. We are here in the realm of opinions supported by only the sparsest evidence. The prevailing opinion is probably that in most circumstances income taxes tend rather to discourage than to encourage productive effort, but that this influence is comparatively weak except where tax rates are high and workers can readily vary the number of days a week that they work (as in the case of the British coal miners mentioned above). It appears, in other words, that we work about as hard as we would if we did not have to pay any income tax.

The effects of the income tax upon the ability and willingness of business firms to invest is even more difficult to describe with certainty. Sometimes it is claimed that the federal tax on corporate income discourages investment expenditures by diminishing cash resources available after payment of dividends, and therefore the ability to finance investment. It may

however be replied that, if the investment is really worth while, the corporation should have little difficulty in obtaining outside finance. Again, the corporate income tax diminishes the prospective yield (after taxes) from the proposed investment. But to avoid the tax, funds must be left idle, and some return is better than none. Or, if the investment is made with borrowed funds, any income tax that results is evidence that the investment has led to income to the firm in excess of the interest charges due to the loan. It is perhaps noteworthy that those who most strongly urge the view that heavy taxes have restricted investment are also those who would stand to benefit most immediately from a lightening of the tax burden. We should not, however, neglect the possibility that their arguments are correct, even if solid evidence to support the view that taxes discourage investment still is lacking.

At this point a word should be said regarding the effect of taxes upon the tendency to save. Owing to the expansibility of credit and the existence of idle cash resources, the supply of savings usually is not a factor limiting investment expenditures. It seems certain that progressive income taxes greatly diminish saving by the wealthy, but that is not a sound reason for concluding that such taxes discourage business investment. On the other hand, there are many who believe, despite the unexampled spending spree of recent years, that the American economy has suffered from a more or less *chronic* shortage of consumer purchasing power—or (what amounts to the same thing) a chronic unwillingness of consumers to use to the full the purchasing power which they possess. By this school of writers (called "underconsumptionists") a steeply progressive income tax is regarded as *beneficial,* inasmuch as it mops up purchasing power for government use, and especially purchasing power which would not otherwise have been spent. Consequently (the argument runs) heavy taxes on the wealthy will make for more spending, better business—for hard work and much investment. We may seriously doubt, however, whether the United States suffers from a chronic lack of purchasing power, or whether—even if it were to do so—a highly progressive income tax would be the best way to overcome such a lack.

EFFICIENCY *VS.* JUSTICE

There can be no doubt that most of the considerations which influence legislators in framing or revising the tax system fall either under the heading of efficiency or under that of justice. However they may be interpreted in a given situation, these are clearly the basic desiderata of any tax

system. Unfortunately neither the long-range effects of a given tax proposal upon the efficiency of the economic system, nor its conformity to the principles of justice, can be established objectively and with precision. Consequently there is ample room for debate and for differences of opinion. Yet the situation is even more complex. For it happens that, even where opinion as to the effects of a tax is unanimous, it may rate highly by one criterion, yet fail entirely to conform to the other. A simple example of this conflict has already been given. The poll tax is highly efficient for the reason that it does not cause anyone to change his market behavior. But instead of being progressive, the tax is regressive, i.e., it takes a *lower* percentage of a large than of a small income. It therefore fails entirely to conform to generally received ideas of justice.

This conflict between standards of efficiency and standards of justice runs, in greater or less degree, through our entire tax system. According to modern ideas, an equitable tax system would possess a considerable degree of progression, at least in a society where income and property are unequally divided. That is to say, the burden of taxation should be so adjusted that the wealthy pay a somewhat higher percentage of their incomes in taxes than do the poor. Yet, to arrange matters in this fashion is to penalize wealth, to discourage people from attempting to become wealthy or to accumulate wealth, and to diminish the rewards to productive effort. Undoubtedly this conflict exists, even where it goes unrecognized or has not become acute.

"ABILITY TO PAY" IN THE AMERICAN TAX SYSTEM

It has been pointed out above that it is not possible to evaluate objectively the principle of ability to pay. Complete agreement will never be reached as to what constitutes perfect fairness in a tax system. Nonetheless we shall assume that a tax does or does not accord with the general notion of ability to pay according as it is or is not progressive. That is to say, we shall assume that regressive taxes do not conform to the principle of ability to pay, whereas progressive taxes do so conform. This is not an especially bold assumption, for it has received the endorsement not only of the majority of students of taxation, but also of extensive legislative practice. The conclusion to which this assumption leads is that income, estate, and inheritance taxes conform to the principle of ability to pay, while customs, excise, sales, and poll taxes do not.

This may be shown as follows. Income taxes take a higher proportion [illegible] and so are progressive. Estate and inheritance

taxes take a higher proportion of large than of small sums passing at death; hence they also are progressive. On the other hand customs, excise, sales, and poll taxes take a smaller percentage of large than of small incomes. The fact that this is so can readily be seen, for instance, by considering the case of cigarette taxes. Obviously the average number of cigarettes bought by individuals with $20,000 a year is less than ten times as great as the average number bought by individuals receiving $2,000 a year. Consequently the tax paid by members of the first group on the cigarettes they buy forms a smaller percentage of their incomes than does the tax paid by members of the second group reckoned as a percentage of *their* incomes. This proposition applies generally to indirect taxes (i.e., to taxes levied on commodities) and to poll taxes. This group of taxes is therefore regressive.

Despite certain developments in a contrary direction, the federal revenue system has, since the introduction of the income tax in 1913, been brought on the whole steadily more and more into accord with the principle of ability to pay—as we have interpreted that principle. Indeed, prior to World War I, as we have seen, federal revenues were derived almost exclusively from customs and excise. Immediately prior to World War II, in 1940, two-fifths of federal revenues came from income taxes; in 1945, three-quarters (Table 22). Since 1945 the proportion has declined somewhat, but is still high (Table 23).

Table 23 FEDERAL, STATE, AND LOCAL TAX REVENUES, 1947

(in millions of dollars)

	Federal	State	Local	Total
Customs	490	—	—	490
Liquor	2,470	480	—	2,950
Tobacco	1,240	250	—	1,490
Other excise and sales taxes	3,500	2,840	150	6,490
Total	**7,700**	**3,570**	**150**	**11,420**
Property taxes	—	260	4,800	5,060
Pay-roll taxes	2,020	970	—	2,990
Corporate income taxes	9,680	460	—	10,140
Personal income taxes	19,340	420	40	19,800
Estate, inheritance, and gift taxes	780	170	—	950
Miscellaneous	380	910	310	1,600
Total taxes	**39,900**	**6,760**	**5,300**	**51,960**

PROGRESSIVE VS. REGRESSIVE TAXES

The contrary developments also deserve notice. The number, but not the relative importance, of regressive taxes imposed by Congress has also increased with the growth of the tax burden as a whole. Under the Social Security Act of 1935 pay-roll (or employment) taxes were imposed, principally to finance old-age pensions. The taxes are collected from the employer, but paid by the worker, and are assessed as a fixed percentage of wages paid. This fact might suggest that the incidence of such taxes is neither progressive nor regressive, but proportional to income. However, the old-age tax is assessed only on the first $3,000 of income, and only on wages and salaries. Similar provisions apply to other pay-roll taxes. Therefore, persons receiving more than $3,000 a year, or receiving incomes from business or property, pay a smaller percentage of their income in tax than do wage earners receiving less than $3,000, or even pay no employment taxes. Consequently, as between incomes below $3,000 a year and incomes above that figure, pay-roll taxes are regressive. Other examples of the growth of regression in the federal tax system are the heavy manufacturers' and retailers' excise taxes imposed on furs, leather goods, and toilet and other articles during World War II.

Despite these qualifications, the federal tax system accords fairly well with ability to pay. This conclusion is reinforced when we reflect that a substantial amount of the revenue from indirect taxes comes from customs and excises levied on liquor (Table 23). While of course liquor taxes are regressive, they probably accord more with common notions of ability to pay than do most other indirect levies.

The proportion of state revenues derived from progressive taxes is much smaller than with federal revenues. As may be seen from Table 23, in 1947 only about 15 per cent of state tax revenues came from income or estate taxes; moreover, state income taxes are less steeply graduated than is the federal income tax. More than half state revenues came from sales and other indirect taxes levied on commodities. The popularity of sales taxes with state governments still seems to be on the increase. In 1947 Connecticut was converted to this form of levy. The effects of indirect taxes in violating the principle of ability to pay is partially modified by the heavy dependence of the states upon liquor, tobacco, and automobile taxes. All these levies are regressive, yet—especially in the case of liquor—it may be argued that they conflict with ability to pay less than do sales taxes, which are

[illegible] necessities.

Like state taxes, city and other local taxes conform less well to the principle of ability to pay than do taxes levied by the federal government. The continued dependence of local government units upon property taxes is quite evident in Table 23. In 1947 cities with populations over 25,000 raised about $2,300,000,000 in taxes. Of this amount more than 80 per cent came from property taxes, and much of the remainder from sales taxes.

SOME OTHER CRITERIA

Undoubtedly the two most important characteristics of a tax, from the viewpoint of public policy, are its efficiency (or economic effects) and its justice (or equity). But there are several subsidiary criteria which, though seldom decisive for or against the choice of a particular tax, are relevant and deserve notice.

Psychology of the taxpayer. It has occasionally been claimed that indirect taxes have the virtue of being "painless." The tax is concealed in the cost of the goods; what the taxpayer does not see—so it is alleged—he does not feel. Income taxes, with the ruthless methods of assessment and inquisition they involve, generate far more mental anguish for every dollar of revenue collected, than do customs or excise duties. So it is said. This is, however, a somewhat superficial view, for whenever we complain about the high cost of living, we display anguish about—among other things—the effects of concealed taxes. Any attempt to increase the use made of indirect taxes would not only raise the cost of living, but vitiate the principle of ability to pay. In passing we may notice that some of the anguish associated with payment of the income tax, especially that connected with the annual payment of a large lump sum, has been removed through the introduction of the "pay-as-you-go" principle. What the taxpayer does not receive, he does not miss as much.

Even the social desirability of an entirely painless system of tax collection (if such could indeed be devised) is open to serious question. Good citizens and alert legislatures should weigh the benefits of government against their cost. If the cost, though still present, is artificially concealed, no such appraisal can be undertaken. It is, indeed, desirable that the citizen should be aware of his tax bill, and should form a rational opinion as to whether or not he is receiving value therefrom. In truth, the anguish involved in paying taxes is in part a price for effective self-government.

Flexibility of tax revenues. A good tax system should include at least some taxes which readily respond in time of emergency to government's need for revenue. Customs duties and excise duties on individual commodi-

ties obviously do not fulfill this requirement. The reason is that, if tax rates are raised, consumption may be so discouraged, especially if substitutes are readily available, that revenue does not increase. The revenue from estate and inheritance taxes is too uncertain for reliance in case of need. Only the income tax on the one hand and the general sales tax on the other have the flexibility required in an emergency. The reliability of the income tax was strikingly shown by the fifteenfold rise in federal income-tax receipts between 1940 and 1945 (Table 22). Of course only a part of this expansion was due to increased rates and lowered exemptions; the point is that heavy taxes did not dry up the source of revenue, or even prevent its expansion. This does not mean that the federal income tax can furnish an inexhaustible supply of funds; yet the tax has shown itself an instrument of great flexibility. In a rather similar fashion, state and city governments have found the general sales tax a powerful engine for raising revenue in time of need—for instance, to meet heavy relief costs in periods of depression. In a way this has been unfortunate, for we have seen that sales taxes run counter to generally accepted notions of ability to pay. Partly for this reason, many states have now adopted income taxes, in order that their revenue systems shall possess needed flexibility.

Cost of collection. The cost of collecting a tax is not usually a vital matter, although if other things are equal a tax that is simple to collect will naturally be preferred to one that is difficult. For the year 1937 over six million federal income-tax returns had to be processed, of which over three million were taxable. With lowered exemptions and larger incomes in 1947, there were submitted no fewer than fifty-two million returns of which forty-four million were taxable. It is not surprising therefore that the administration of the federal income tax should require a small army of collectors. The federal Bureau of Internal Revenue has a staff of about 50,000 persons. By contrast, the simplest tax to collect is an excise levied on the manufacture of some commodity produced in only a few places. For instance in 1945 there were sixty-two cigarette factories in the entire United States. Consequently the federal excise on cigarettes was one of the cheapest of all taxes to collect. Where only a small number of assessments need be made, the administrative and accounting problems are reduced to a minimum.

Tax evasion and tax avoidance. In the administration of a tax consideration has to be given, not only to the problem of bookkeeping, but also to the question of evasion. Where only a few persons are involved in the manufacture or importation of a dutiable article, as in the case of tobacco or dis-

tilled spirits, the prevention of fraud is comparatively easy. To make certain that none of the fifty-two million income-receivers have concealed any income is a much more difficult—perhaps an impossible—task. The introduction in 1943 of "pay-as-you-go," which involves deduction of income tax on wages and salaries at source, has somewhat diminished opportunities for evasion of the federal income tax.

Tax evasion, which is illegal and can lead to heavy penalties, should be distinguished clearly from tax avoidance, which is of course perfectly legal. The consumer who switches from a taxed to an untaxed commodity, and the citizen who migrates from a high-tax to a low-tax locality, are both avoiding taxes—in a perfectly legal manner. Taxing authorities try so far as possible to close up loopholes. Because corporate income-tax rates have long been lower than individual rates in the upper income brackets, many wealthy families formerly could reduce their tax liability by incorporating themselves. To prevent such tax avoidance, Congress imposed special taxes on closely held corporations.

Tax exemption. In many cases the effectiveness—the revenue-raising capacity and sometimes the fairness—of taxes is reduced through the existence of traditional statutory or constitutional exemptions. Some of these are quite minor in extent: for instance, the exemption accorded foreign diplomats for the importation of dutiable articles. Much more significant is the existence of a large mass of government obligations, especially those issued by state and local governments, whose income is partially or completely exempt from the federal income tax.

The most common mode of tax exemption lies in the practice of governments which exempt their own properties from taxation. A government may also exempt the instrumentalities and properties of other units of government. Mutual exemption from taxation of federal and state properties is founded upon the legal doctrine that the taxation of the instrumentalities of one government by another is a violation of the former's sovereignty. The fiscal and social implications of this doctrine were not of vital importance until the adoption of the federal income tax, which taxes income from property rather than property itself.

The war-loan issues of 1917-20 and the heavy borrowing of the federal government since 1930, coupled with extensive issues of bonds by states and cities to finance capital outlays, caused a considerable expansion of government debt, most of the income from which was tax-exempt. Exemption from tax of income received by holders of federal bonds has ceased, but most state and local issues still possess this privilege. Another anomaly, the

mutual exemption by federal and state governments of the salaries of public employees and officials, was discontinued in 1939. From the standpoint of this analysis, the most important feature of tax exemption is its effect upon the distribution of the tax burden. The exemption of either public securities or salaries is clearly incompatible with the principles of graduation of income taxes and of ability to pay.

REGULATORY TAXATION

Obviously the purpose of most taxes is to obtain revenue to finance the needs of the governmental agency which imposes them. But in some cases the raising of revenue is a secondary, or even a nonexistent, objective. The history of the United States contains many examples of attempts to levy taxes, ostensibly for revenue, but in reality to control or regulate some phase of economic life. Among examples of federal taxes imposed wholly or partly for reasons other than the raising of revenue may be listed: duties on liquor, oleomargarine, and narcotics; the tax imposed for the suppression of state bank notes in 1865; the tax imposed in 1921 upon incomes derived from the employment of child labor (declared unconstitutional); and the New Deal (Agricultural Adjustment Act) taxes on the processing of agricultural products (also declared unconstitutional). The use of the tariff to protect domestic industry from foreign competition and the use of excise levies to discourage the consumption of liquor and tobacco are policies endorsed by the practice of most Western nations.

Examples of taxes imposed mainly for purposes other than the raising of revenue are not confined to the federal government. A striking illustration is the movement among the states for special taxes to discourage chain stores. In 1937 the Supreme Court upheld a Louisiana law imposing a tax upon chain-store companies doing business in the state.

Under that law, the amount of tax to be paid by a particular company was determined by a sliding scale, the tax depending upon the total number of store units in the national chain, regardless of the number of units located in Louisiana. Of the twenty states which levied special taxes on chain stores at that time, Louisiana had the most sweeping statute. The other nineteen states based their tax per store upon the number of units located within their borders. By 1947, twenty-one states were levying chain-store taxes. It appears that the real purpose of taxes on chain stores is less to gain revenue than to protect the small-scale local merchant, influential in many state legislatures, against the competition of the newer form of retail organization. The burden of the tax is, at least in part, passed directly to

consumers through higher prices; or indirectly by enabling the less efficient, high-cost independent merchant to remain in business.

INFLATION AND THE BURDEN OF TAXATION

To this point we have chiefly considered the burden of individual taxes. For some purposes the emphasis should rather be placed upon the burden of taxation as a whole. When, for example, the aggregate volume of tax collections is large, the burden will be tolerable only if the national income, out of which the aggregate of taxes is paid, is high. This is true, even though it be recognized that the total amount of (say) income taxes levied upon a given national income can be made somewhat larger or somewhat smaller simply by changing the amounts of income exempted from the tax or by changing the rates. Obviously a very large aggregate of income taxes (or, for that matter, of other taxes) can be collected only if the national income also is very large. If there is doubt in the reader's mind as to why or how this is the case, let him consider whether the aggregate of income taxes and other taxes collected by our federal government in 1948 could have been collected from a national income no larger (in dollar terms) than that of 1932 or even 1939.

There are two ways in which the national income can become large enough to yield, or to bear, a very greatly increased aggregate of tax collections. One way is through an increased real national product, with a consequently increased national income in dollars; the other way is through an inflationary rise of prices with a consequently increased national income, not in real terms, but in dollars. When a government's expenditures become so large (as, for example, in wartime) that its current revenues cannot be—or at least are not—raised sufficiently to balance its budget, the cost of government expands without a corresponding rise in the burden of taxation. The excess cost of government is met by borrowing, and is felt by the public, not through the need to pay higher taxes, but through a rise in the cost of living.

For the deficit financing will cause an inflationary rise in prices. There will occur an increase in the dollar value of the national income, not matched by any corresponding expansion in the output of goods and services. The national taxable capacity, measured in dollar terms, will have increased. When the inflation has run its course—for instance, after the war and its immediate effects have passed into history—prices, and the national income, and almost everything measured in dollars, may all be at a permanently higher level. A permanent, or at least not immediately reversible, deprecia-

tion in the purchasing power of the dollar has then occurred. When the budget is once more balanced, the burden of taxation will again reflect the cost of government. The tax burden, like the national income, will certainly have increased in money terms. For the cost of government, like the cost of everything else, will be higher than before. Whether the tax burden has increased or diminished, in relation to the ability of the community to bear it, depends on whether the cost of government has increased or diminished in relation to the national income.

APPRAISING THE AMERICAN TAX SYSTEM

Is the American tax system a satisfactory one? The foregoing discussion will have made it abundantly clear that this question can be answered from many different viewpoints. We have already discussed at length the extent to which justice or fairness finds expression in the fiscal practices of the nation, and have observed the importance of ability to pay as a criterion in this connection. We have noticed the modern tendency to interpret ability to pay in terms of progression, and have studied the increasing use made by the federal government of the graduated income tax. We have seen, too, that state and local taxes do not conform as well with this concept of ability to pay as does the federal tax system. Another important attribute of any tax system seemed to be its effects upon economic efficiency. Fears have been expressed that the heavy corporate income taxes and steeply graduated individual income taxes assessed by the federal government may diminish incentives to work and to invest. Yet we saw that this matter still lies largely in the realm of opinion, and that little evidence bearing upon the question has so far been assembled.

A desirable tax system must be sufficiently flexible or elastic to meet unforeseen contingencies and readily adaptable to new economic and social conditions as they emerge in a swiftly changing world. The flexibility of the main federal taxing instrument—the income tax—was dramatically demonstrated during World War II, yet federal revenues as a whole failed to keep pace with wartime expenditures. This failure resulted in an inflation of the means of payment and a decline in the commodity value of the dollar, which have already exacted a heavy price in labor strife and may leave other disagreeable legacies.

Whether alternative tax systems would have stood up better to the strains imposed by the financing of a major war, is a question which lies outside the scope of this discussion. On a more technical level, two illustrations may be given of the kind of rigidities which have tended to weaken

the American tax system, in peace as well as in war. One is the heavy dependence of state and local governments upon the general property tax, which was not modified until it had become outmoded, and suffers even yet from grave defects. The other is the tax-exemption privilege which applies to most of the income derived from state and local government securities, a privilege which both diminishes the flexibility of the income tax and impairs its conformity to the principle of ability to pay.

Our purpose at this point is not to go further into these important matters, but to examine more closely the relations between the several parts of the American tax system.

CO-ORDINATION AMONG FISCAL AGENCIES

Financial practices of governmental units in the United States have been much criticized for lack of co-ordination. No doubt perfect co-ordination should hardly be expected in a decentralized system of government, which necessarily means a decentralized tax system. In the American scheme of government, local units render many important services which could not be undertaken without some measure of independence in financing them. Without some fiscal resources of their own, they would become entirely dependent upon subsidies from large units of government, an arrangement which would tend to destroy many of the advantages of local self-government. On the other hand, the greater the independence of local units, the greater is the resulting disorganization of the tax system as a whole. Under these circumstances, such problems as competitive tax-grabbing and multiple taxation are likely to become very serious.

Many of the evils of local finance could be mitigated by a more effective co-ordination among all types of governmental units. Such co-ordination would not be incompatible with a reasonable degree of local financial independence. Some trend toward greater co-operation is evident in this country at the present time. A conspicuous illustration is the elaborate arrangement of grants to localities, chiefly for education, that exists in some states. Furthermore, a substantial amount of local revenue for other purposes is derived from federal and state aid and from shared taxes. The most important form of co-ordination between federal and state taxation is the tax-crediting device used in connection with death taxes and the unemployment-benefit pay-roll tax. By this plan Congress imposes a tax and then, in the event a state does the same, that state's residents are relieved of part or all of the federal tax. Thus double taxation is partly or wholly avoided.

Another example is the practice whereby the federal government, by allowing income-tax payers to deduct certain state and local taxes in computing their net incomes, accomplishes an important—but seldom recognized—form of co-ordination. Again, federal grants to states for highways and, during the 1930's, for relief, have been substantial. States, on the other hand, neither make grants to, nor share any individual taxes with, the Federal Treasury.

One of the most pressing current problems in state-local financial arrangements arises because states have enacted laws limiting the taxing authority of local governments. In consequence, the latter sometimes find it impossible to raise sufficient revenue to finance the services they seek to provide—or which the state requires them to provide. A few states recently have revised their laws to permit local governments a wider latitude in levying taxes.

DOUBLE TAXATION

Another phase of the relation between different fiscal jurisdictions, and even between different taxes in the same jurisdiction, is the problem of double taxation. Partly it arises from the scramble for revenue which characterizes competition between taxing agencies. All taxes must eventually be paid from some source of income: salaries and wages, rents and royalties, profits, dividends, and interest. When more than one tax is paid from the same source, double taxation exists. Obviously, in this sense, direct and indirect taxes duplicate each other to some extent. For instance, a man who pays an income tax on his salary and a sales tax on his consumption has to pay both taxes out of a single income. Other examples will readily come to mind. A tax may be levied both upon income which consists of interest, dividends, or rents and upon the property that produced that income. A state may even impose two or more taxes upon the same property; that is, a tax may be levied on the total value of a piece of land, and another on a mortgage secured by the same piece of land; or one tax may be levied on the securities, and another upon the tangible assets, of the same corporation.

Another variety of double taxation occurs when two different jurisdictions levy taxes upon the same source of revenue. Personal incomes are taxed by the federal government, and by twenty-nine states and the District of Columbia. Corporate incomes are assessed by the federal government, thirty-one states, and the District of Columbia. During the fiscal year 1947 federal income-tax collections amounted to $29,000,000,000 and accounted for 74 per cent of total internal revenue. During the same year in-

dividual states collected $879,000,000 in income taxes, amounting to 15 per cent of total state revenues other than unemployment-compensation taxes. This duplication of taxes levied upon the same source, and virtually the same tax base, not only increased the total tax burden in a haphazard manner, but also unnecessarily duplicated collection costs. To meet this difficulty, Governor Dewey of New York proposed in 1947 that the states abandon income taxes altogether, and that in return the federal government leave excise and sales taxes to the states. Such a plan, however, would delay assimilation of state tax systems to the ability-to-pay principle, and would involve other difficulties.

Certain types of property passing at death may be taxed three times—by the state where it is located, by the state where the deceased lived, and sometimes by the state in which the beneficiary lives—as well as by the federal government. State and federal excises often overlap and may fall heavily upon the same commodities. The federal levy on gasoline consumption, enacted in June 1932 as an emergency tax to be levied for one year, extended for another year by an act of June 16, 1933, and continued by subsequent revenue legislation each year, adds considerably to the burden of double taxation. Gasoline taxes are levied by federal government, by all state governments and by many local governments. The total levy reaches 6½ cents per gallon in Alabama and Mississippi. Because all states rely upon gasoline taxes as one of the chief sources of their revenue, they resent what they regard as encroachments by the federal government upon their domain.

LOCAL REVENUES AND LOCAL RESPONSIBILITY

No doubt greater co-ordination between fiscal jurisdictions, and between individual taxes levied by the same jurisdiction, is desirable and will in time be achieved. But we should not forget that the multiplicity of revenue-raising agencies, and the great variety of taxes which exist in the United States, are both in part a reflection of the size and diversity of the country. Local responsibility in spending can be achieved in full measure only if revenues also are raised locally. Unfortunately the general property tax, sales taxes, and other levies suitable for revenue-raising by small units often have proved unsatisfactory. These taxes have been found to lack flexibility, or to bear little relation to capacity to pay, or to suffer from both defects. Of course grants from the Federal Treasury to the states, and from state treasuries to cities and counties, have helped to place the powerful revenue-raising capacities of the larger units at the disposal of the smaller.

But the easier it becomes for local officials to turn to Washington or the state capital for a solution of their problems, the less efficient is local administration likely to be. Too extensive grants-in-aid tend to sap local initiative and to destroy local responsibility. Therefore local revenues are needed, even if it is hard to raise them in an efficient manner. This is a real dilemma. Some, at least, of the faults the purist sees in the American tax system are the price Americans pay for the preservation of local responsibility, that is, of effective local self-government.

In this chapter we have examined some of the leading ideas pertaining to that interesting and important division of the subject concerned with tax revenues. We have noticed the leading elements to be considered in judging the incidence and effects of individual taxes, and have observed the major requirements for an effective revenue system. Yet tax revenues are only one way, if the most important way, of financing public expenditures. We saw in Chapter 24 that public authorities borrow from time to time to meet their needs. Accordingly, the creation, management, conversion, and eventual extinction of public debt forms an important division of the subject matter of public finance. This topic will be treated in the next chapter.

CHAPTER TWENTY-SIX

Government borrowing

The outstanding obligations of all governments in the United States ggregated $272,000,000,000 as of January 1, 1949; of this amount the fed-ral government owed $257,000,000,000, in round numbers, and state and ɔcal governments $18,000,000,000. Such vast sums are difficult to appre-iate. We may notice, for instance, that the public debt is roughly equal to ne and one-half times the annual national income. If we had no other use ɔr income, but devoted every penny we earned to the repayment of the ublic debt, we might in theory accomplish this feat in a period of about ighteen months. This fantasy is suggested merely in order to convey some lea of the magnitude of the debt.

When governments spend more than their receipts, they, like private ıdividuals, ordinarily must make up the difference by borrowing. When a rivate citizen goes into debt he ordinarily starts to worry. Many citizens ıve worried during the past few years about the increasing size of the deral debt. At the beginning of 1948, the head of a family of four, ascer-ining the amount of the privately held federal debt, might have com-ıted that the debt amounted to approximately $1,800 per person, or $7,200 ır his entire family. A debt of this size obviously would be a matter of ɔncern to the average family of four. People sometimes make such compu-tions and occasionally get their names in the papers by writing letters to e editor denouncing governmental extravagance and reckless spending. his is a natural response in a society where thrift has long been accounted prime virtue and debt, public as well as private, an incubus if not a vice. ıe of the first principles of public finance—honored largely in the breach ıas been that of the balanced budget.

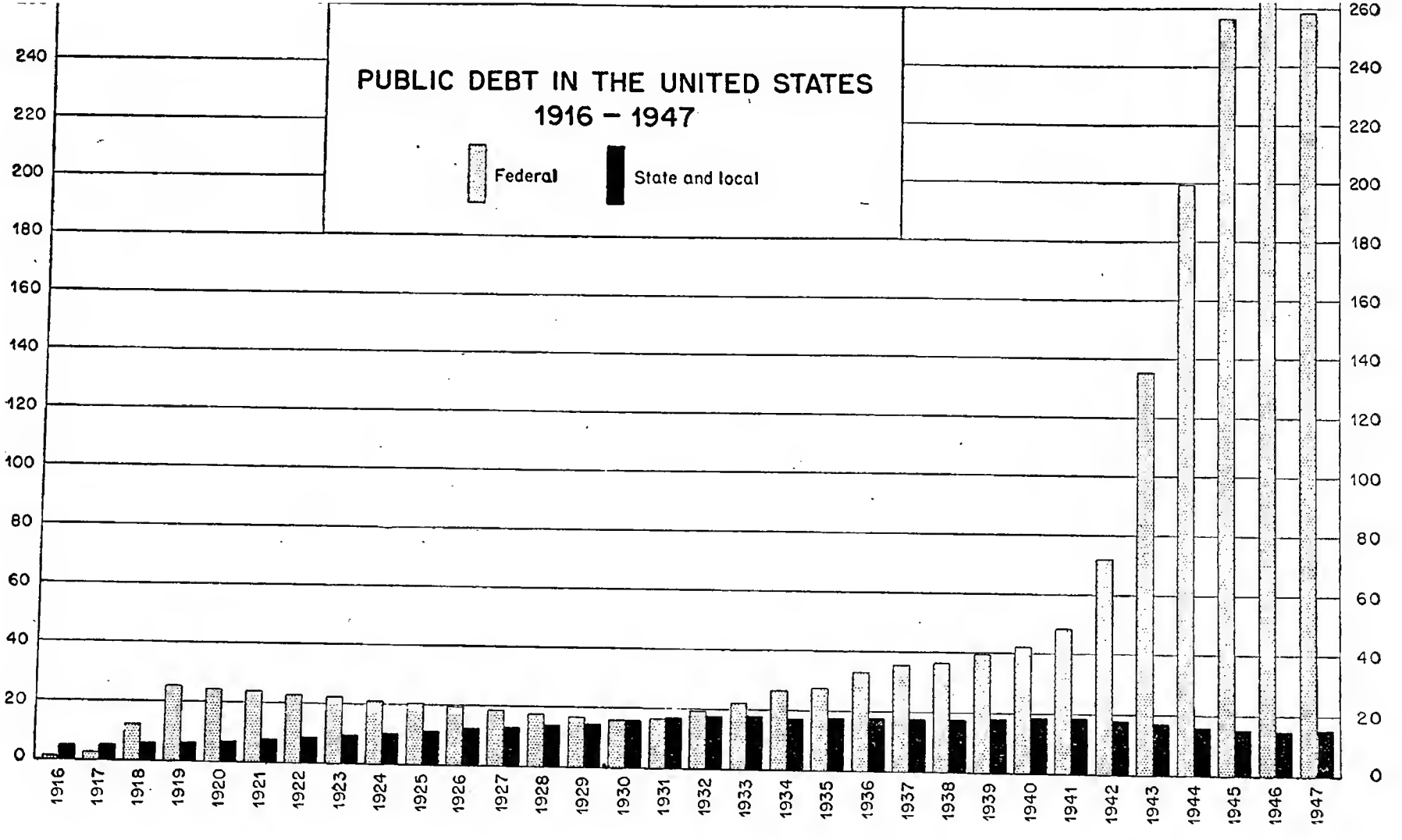
THE PUBLIC DEBT SINCE 1916

The recent history of public debt in the United States is easily traced on the accompanying chart (Fig. 27). In 1916, the year before the United States entered World War I, the debt owed by the federal government was approximately one billion dollars. In the same year the aggregate debt of states and localities amounted to approximately five billion dollars. During the period of United States participation in World War I, the federal debt increased rapidly, reaching a peak of $25,500,000,000 in 1919. In the prosperous 1920's, the federal debt was paid off at the rate of about a billion dollars a year and in 1930, at the beginning of the Great Depression, had fallen to approximately fifteen billion dollars.

In the meantime, the level of state and local debt rose only slightly during World War I, and at the beginning of the 1920's totaled only about six billion dollars. The rapid expansion of state and local debt during the 1920's (Fig. 27) was due in large part to the great road-building program necessitated by the advent of the automobile as a major form of transportation, and by the expansion of educational facilities. By 1930, state and local debt aggregated about fourteen billion dollars. Thus while the federal debt during the 1920's was falling at an average rate of about a billion dollars a year, the total debt of the states and localities was rising at almost the same rate.

During the Great Depression of the 1930's, the situations of the two levels of government were reversed. States and localities sharply curtailed public-works programs and attempted to balance their budgets, so that state and local debt, after reaching a peak of seventeen billion dollars in 1934, gradually declined during the remainder of the decade. The reasons are not far to seek. First, state and local governments tend to spend heavily during prosperous times and to retrench during hard times. Secondly, state and local government tax revenues contracted severely during the depression, so that most states and municipalities were hard put to maintain vital services and pay interest on debt already outstanding. Indeed, financial resources of the majority of states and cities were so strained during the early years of the depression that they could not meet the cost of caring for the unemployed and were forced to call on the federal government for assistance.

Partly because of the magnitude of the unemployment problem and partly because of the financial incapacity of state and local governments the federal government felt obliged during these years to start spending


PUBLIC DEBT IN THE UNITED STATES
1916 – 1947
Federal
State and local
0
20
40
60
80
100
120
140
160
180
200
220
240
260
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
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1945
1946
1947

on a relatively large scale to relieve the indigent and to create employment. Protests were not wanting from proponents of the orthodox view, who felt that deficit spending—even to relieve distress and to employ usefully labor which otherwise would have been idle—violated every principle of conservative finance.

DEFICIT SPENDING IN DEPRESSION

Controversy over the issue. Orthodox economic thought had long tended to assume that the "normal" position of the capitalist economy is one of reasonable stability and full employment of resources, including labor, and that the economy, in the absence of "undue" governmental interference, will adjust itself to disturbances and revert to its normal position. Consistent with its premises, this school of thought also held that the best palliative for recession, when income, employment and production are falling, is to slash public expenditures and cut taxes. These writers urge that everything possible should be done, short of unbalancing the government's budget, to relieve the economy of the burden of taxes. So strong was this tradition that, when the Hoover administration early in the 1930's was forced to incur deficits to maintain minimum essential functions of government and to prevent complete economic chaos, it was roundly condemned for its "extravagance." The Democratic party in 1932 made much political capital out of the Republican record and came into power pledged to the principle of government economy and a balanced budget.

In the light of present economic thinking, it is perhaps difficult to understand how such a notion could have become so firmly entrenched. For although the ultimate causes of business fluctuations are not yet thoroughly understood, there can be no question but that they have as an essential characteristic fluctuations of private spending; furthermore, it is clear that in the beginnings of cyclical upswings and downswings, such fluctuations tend to reinforce themselves and to be cumulative in their effects. An attempt to restore prosperity by cutting government expenditures at a time when private investment and consumption expenditures are falling resembles an attempt to revive a fire by pouring on water. It not only cuts expenditures, and hence income, by the amount of the reduction of the government's budget, but, by depriving government employees of their purchasing power, causes them to spend less. This of course reacts upon the income of their butchers, bakers, and candlestick makers, who in turn will have less to spend, and so on.

Deficit spending under the New Deal. During the 1930's, faith in the efficacy of balanced budgets and minimal government expenditures as the surest and quickest way out of the depression gradually waned. When the Roosevelt administration came into power in 1933 at least 25 per cent of the working population was unemployed, destitution was widespread, and public morale was at a low ebb. The administration was quite unable to reconcile its promise of a return to fiscal orthodoxy with its basic pledges of a "New Deal" for the common man. No real effort was made to balance the budget. For good or for ill the federal deficit was soon swollen by expenditures for emergency relief and various other measures to alleviate distress and a general breakdown. Soon the administration began to substitute extensive public works for its general relief program. The objects of the shift from direct relief to work relief were: (1) to salvage at least part of the labor time which previously had been going to waste through unemployment; and (2) to obtain some benefit for the community in return for the funds disbursed. The new policy led to larger rather than smaller deficits. From the end of 1932 to the end of 1939 the debt mounted from eighteen to thirty-five billion dollars.

For a long time, however, deficit spending was considered an abnormal measure to be ended as soon as the emergency was past. To justify the continued deficits, a theory of "pump-priming" was advanced.[1] According to this theory, if economic activity sinks to a sufficiently low level self-correcting forces may not be strong enough to effect a revival, and government spending may be necessary to "shove the economy off dead center." Once the economy has been sufficiently stimulated by doses of government spending, so it was argued, recovery should be self-sustaining.

Under the federal deficit-spending program, income and employment increased after 1933. By 1937 total production exceeded the previous peak level of 1929. In the meantime, however, the labor force had increased at the rate of about 600,000 persons per annum, and productive techniques were steadily becoming more efficient, so that even in 1937, unemployment was still high. Moreover, unfortunately for the theory of pump-priming, the recovery proved not to be self-sustaining. In 1937 pump-priming expenditures were curtailed, and the federal government's budget was approximately in balance. In the latter part of that year economic activity fell sharply. While some economists maintained that the pump-priming theory had not been tested adequately, others felt that it had been entirely discredited. At the end of 1939 the nation was still at peace, but the federal

[1] See, for example, the President's budget message of January 1936.

debt had risen to $40,000,000,000. Forecasts of financial disaster were freely made and a distinguished banker was widely quoted to the effect that, if the debt ever reached $60,000,000,000, the United States Treasury would be bankrupt.

The wartime debt. Controversy concerning the merits of deficit spending as a means to prosperity were soon rendered irrelevant by the inexorable need to provide for vast military expenditures. During the five-year period 1941-45, the federal debt rose from $45,000,000,000 to $260,000,000,000. Predictions of federal bankruptcy were, however, not fulfilled. Meanwhile, state and local governments found that the war boom increased their tax receipts, but also found their capital expenditures cut by wartime restrictions. As a result state and local indebtedness had fallen below $15,000,000,000 by 1946.

In summary, the last thirty years have shown a roughly inverse relationship between the fluctuations of federal indebtedness and that of state and local governments. That is to say, the federal debt has tended to increase during business depression or wartime activity and has declined in periods of peacetime prosperity. State and local debt, on the other hand, has risen during prosperous periods, indicating a high level of capital expenditures during such times, and remained nearly constant or declined during periods of depression or war. At the present time (1948), state and municipal debt is again mounting rapidly, while the federal debt is being reduced (albeit slowly), in conformity with the pattern.

Because the federal debt is nearly twenty times as large as state and local debt, problems presented by the federal debt bulk largest in discussions of public policy. The following treatment will relate chiefly to the federal debt and federal deficit spending. To some extent, however, the problems are identical with those arising out of state and local government deficits.

THE NATURE OF THE DEBT BURDEN

Since a large part of the public debt is created for wartime expenditures, it is pertinent to inquire whether a nation can in fact succeed in shifting the cost of a war onto succeeding generations. This inquiry has evoked considerable discussion and some difference of opinion. Wartime Secretaries have regularly excused large-scale Treasury borrowing on the ground that some part of the costs of the war should be postponed to the future. Whether or not such postponement is effected depends on the meaning attached to "costs." The present generation may, it is true, escape some

of the *tax* burden. Yet the *real* or *physical*, and certainly the *psychic*, burden of sacrifice tends to fall principally upon that generation which fights the war. For example, a large part of those resources which must be diverted to the production of instruments needed for war might otherwise have been used to produce consumers' goods or to add to the nation's productive equipment. The war generation is obliged, therefore, to forego some part of its current consumption; it also loses whatever improvements might have been created had there been no war.

Analyzing the burden of the debt. Worried Taxpayer, mentioned above, who computes his family's share of the privately held national debt and finds that it comes to approximately $7,200 (assuming a family of four) may have less cause for alarm than he thinks. Let us consider some of the things which he should take into account.

In the first place, the burden of the public debt consists primarily of the debt service—particularly the interest payments, which, as of the beginning of 1949, amounted to above five billion dollars annually. This may mean, although it does not necessarily mean, that tax payments have to be five billion dollars higher than if there were no debt. Assume, for the moment, that federal taxes *are* five billion dollars higher than would otherwise be the case. Then Worried Taxpayer's family's proportionate share of the taxes required to service the debt would be approximately $145 a year. But this does not mean that the family in question is taxed $145 to support the debt. That depends primarily upon the amount of its income and the kinds of additional taxes that are levied to meet the interest payments. If the interest payments are obtained by raising progressive income-tax rates relative to what they would otherwise be, and if Worried Taxpayer's income is well above the average, then it is possible that he will have to pay much more than his proportionate share of the interest cost; whereas if his income is relatively small, he may have to pay little or none of it.

In the second place, Worried Taxpayer must take into account the share of the national debt that his family *owns*. If, during the war, the family had bought $5,000 worth of Series E War Savings Bonds (which pay approximately 2.9 per cent annual interest if held to maturity), they would receive therefrom an income equal to their proportionate share ($145) of the interest cost on the debt. If the family's income was well above the average, we should expect them to have bought more than their proportionate share of bonds to finance the war, so that their income from bond interest should offset to some extent, if not entirely, the taxes they have to pay to support the debt. If the family is too poor to have bought any bonds, it is not likely to have to pay much in taxes to maintain the debt.

But this is not the whole story. In analyzing the economic effects of a public debt one cannot simply compare the existing situation (with the debt) with the same situation, assuming no debt but keeping everything else unchanged. For example, if affairs during the war had been so managed that the debt had been kept below (say) one hundred billion dollars, a great many other things in the economy would be different too. Worried Taxpayer probably would have had to pay much heavier taxes during the war, so that his present savings might be much smaller than they are. On the other hand, heavier taxation during the war probably would have prevented much of the war and postwar price inflation, so that Worried Taxpayer might now be either better off or worse off than he now is, depending on whether or not in fact he has profited by the inflation. If he is a teacher or a civil service employee, for example, he is probably worse off by reason of the inflation, but if he is a farmer he is probably considerably better off.

The consequences of financing a major war by borrowing clearly are thoroughly complicated. Consideration of the effect of the debt upon the individual taxpayer leads to some significant conclusions about the burden of a debt upon the economy as a whole. As a first approximation, we may say that as long as the public debt is owned by people inside the country, the people in effect owe the debt to themselves (or to each other), so that the only burden involved is that of transferring funds from taxpayers to bondholders, and the real national income and wealth of the country as a whole are not affected. The situation is quite different where government obligations are held by foreigners. In that case payment ordinarily involves the export of valuable goods or services from the debtor country without any return. Numerous times in the past, debtor countries have found the burden of payment too heavy and have been forced to default on their obligations to foreigners. Since the public debt of the United States is owned almost entirely by Americans, the question need not be further discussed at this point.

It will be apparent from what has been said that the most noticeable feature of the public debt is that it involves substantial transfers of cash from taxpayers to bondholders—two groups which in part, but in part only, consist of the same individuals. There is no apparent reason why payment of interest on the debt need use up productive resources. Should we then conclude that the existence of this mountain of paper claims represents no real burden whatever upon the community at large? Many writers have so concluded. Yet the very act of collecting taxes creates a certain friction,

perhaps even exasperation. In addition, if the taxes have to be high (because the interest disbursements are large) they may conceivably discourage projects of investment which would have benefited the community, and added to the national income, had they been carried out. Moreover the mere mechanics of transferring bond interest and principal from taxpayers to bondholders absorbs some resources, notably the labor of tax collectors.

Finally we should notice that the burden of the public debt—to the extent that it really is a burden—depends to a considerable extent upon the level of the national income. Although there is no way of defining the debt burden unambiguously in terms of its relationship to national income, two magnitudes may be derived from this relationship which (considered together) roughly indicate whether the debt burden is increasing or decreasing over time: (1) the ratio of debt interest to the national income; (2) national income minus debt service charges. Other things being equal, an increase in the ratio of interest on the public debt to the national income indicates an increase in the burden of the debt; secondly, an increase in national income minus debt service charges indicates a decrease in the burden of the debt. Neither of these magnitudes is necessarily significant by itself. In 1939, for example, income payments to individuals in the United States totaled $73,000,000,000, while interest on the national debt amounted to approximately $1,000,000,000. For 1946, the totals were $177,000,000,000 and $5,000,000,000 respectively, representing an increase of 150 per cent in the national income and 400 per cent in the interest on the public debt. While the ratio of debt interest to income was larger in 1946 than in 1939, most people would probably consider that the burden of debt in 1946 was less merely because income minus debt interest was so much higher. If in the next few years the national income should fall by half, as it did between 1929 and 1933, the burden of the debt obviously would increase greatly, both because the ratio of interest to income would increase, and because total income minus debt interest would decrease. From this we can draw a significant conclusion: the best way to minimize the burden of the public debt is to follow policies to maintain and increase the national income.

Alternatives to debt. It needs to be emphasized again that the effects of the debt cannot be completely analyzed without taking into account the alternatives to creating the debt in the first place, and the effects which these alternative courses of action, if pursued, would have had upon the economy. Ignoring such considerations is one of the commonest mistakes of the untrained analyst. Ordinarily, the alternatives to creating debt are (1) to refrain from making the debt-creating expenditure and (2) to finance

the contemplated expenditure through taxation. Consequently, in considering the effects of a given increment of public debt, one must consider what would be the state of the economy if the expenditure had not been made and if it had been financed by taxation.

All this demonstrates that the analysis of the burden of the public debt is very complex. This is necessarily so because the economy is very complex. But the complexities involved are no excuse, as many people seem to think, for ignoring them.

THE PUBLIC DEBT AS INVESTMENT

Government obligations may be classified according to the time interval between their issuance and maturity. Some mature after a few weeks or months, others mature only after the lapse of many years; still others are issued with maturity dates between these two extremes. Short-term evidences of public debt, called treasury certificates or bills, were originally used principally for the purpose of borrowing in anticipation of tax revenues. This form of borrowing has been so cheap in recent years that its use by the Treasury has expanded considerably. However, short-term debt is normally "funded" sooner or later, i.e., converted into a longer-dated obligation, to cut down frequent renewing, and to insure against the risk of a rise in interest rates. Federal long-term issues take the form of Treasury bonds maturing at some distant future date, or savings bonds, such as the so-called baby bonds, maturing in ten years. In addition, Treasury notes, running for intermediate periods of from one to five years, are sometimes issued. Because of its vast size, and the consequent necessity of issuing obligations which appeal to the widest possible variety of investors, the debt presents an exceedingly complex structure of interest rates and maturities.

Government bonds offer the public a form of investment which is both liquid and safe, so far as the certainty of interest and principal payments are concerned. Many private investors, particularly those who desire safety in their own investments or who are seeking investments for trust funds, prefer this type of security with its low rate of return to a more risky one with the possibility of larger gains. Insurance companies, likewise, have invested heavily in government bonds. On the other hand, the liquidity of government bonds—especially the short-dated issues—makes them an attractive form of investment to commercial banks. It is not surprising, therefore, that stable governments the world over, except in periods of extreme inflation, have had little difficulty in selling their obligations.

THE PUBLIC DEBT AND THE SUPPLY OF PURCHASING POWER

Both the size and management of the public debt have important effects upon the total supply of money (that is, currency and demand deposits) and hence upon the health of the whole economy. We have seen, for example, that public borrowing may be harmful to the economy as a whole if, by increasing the total supply of purchasing power, it promotes inflation. The inflationary effects of public borrowing were much felt throughout the world during World War II and the years which followed. On the other hand, the repayment of public debt may be used as an instrument for decreasing the total supply of purchasing power, thus promoting deflation. The economic effects of the debt, therefore, depend upon how it is managed, and it seems only sensible that debt management should be conducted with a view to achieving what are generally conceded to be desirable effects.

We now turn to the question of the effects upon the total supply of purchasing power of different methods of financing a deficit. In discussing this question, it will be assumed that a government budget for some period calls for a given amount of deficit spending (the discussion applies both to the federal and to state and local governments). To make the matter more concrete, we will suppose that military expenditures increase suddenly, and that tax revenues cannot be raised immediately.

The answer to our question depends primarily upon whether the government borrows from commercial banks or from individuals and nonbanking institutions. It was shown in Chapters 20 and 21 that when the government borrows from commercial banks the immediate effect is to create purchasing power in the form of checking accounts (this, of course, applies as well to most loans made to private individuals). That is, the government in effect sells a note or a bond to the bank, and the bank, in order to pay for the government obligation puts a demand deposit (checking account) at the disposal of the government. This constitutes a net increase in the total supply of bank deposits in existence. The expenditure by the government of the borrowed funds puts the checking accounts in the hands of private individuals and corporations, who in turn may of course spend them with other individuals and corporations, and so on.[1] Consequently, government

[1] Some recipients of government checks may elect to cash instead of deposit them. If this happens on a large scale, the paying out of cash will decrease bank reserves; under some circumstances this may impair the ability of the banks to make loans to private individuals. (See the discussion of the deposit-creating process in Chapter 20.) The

borrowing from the banking system usually adds to the total supply of money in circulation and therefore is tantamount to the creation of new money.

It may be asked why the federal government, since it possesses the exclusive power to create currency, must expand the supply of money by selling bonds to the commercial banks. Why should not the government simply print the money it requires, and, if it wants checking accounts, deposit the money in commercial banks? This would save paying the commercial banks interest on government obligations. There appear to be three main reasons why this expedient is not used. First, people generally do not understand the essential mechanics of the monetary system and tend to be suspicious of this method of raising government funds, since the great inflations of the past usually have been associated with printed money. Secondly, it is of course true that, if the banks were given paper money instead of bonds, the government would not have to pay any interest. In that case the commercial banks would be deprived of a source of earnings, a loss which might have to be made up at least in part by such expedients as raising the rate of interest on private loans or charging the public for various services which are now performed free of charge. One effect of giving bonds instead of paper money to the banks in return for deposits, therefore, is that banking services are partially supported by general taxation rather than by charging specific prices for specific services. Thirdly, and most important, is that only a fraction of all the government bonds issued are bought by banks. A larger proportion is bought by private individuals and nonbanking corporations. As will be shown below, these purchases are not inflationary, while purchases by banks tend to be. During wartime, the government sold to banks only as much of the public debt as other investors would not buy. If the government issued additional paper money in large quantities, concurrently with its attempt to sell large quantities of bonds, nonbanking investors, fearing the inflationary effects of the new currency, might become increasingly reluctant to buy bonds. The government might then be forced to finance the costs of a war very largely by issuing new currency. All such financing would, under wartime conditions, be inflationary.

If, under the circumstances assumed in this discussion, the government financed its deficit by borrowing from private individuals and nonbanking corporations, the aggregate amount of spending power available to the pub-

banking system as a whole ordinarily has little reason to fear such a contingency, however, although it may develop in the case of individual banks.

ic would tend to remain the same. When an individual buys a savings bond, 'or instance, his cash balance is decreased by the size of the purchase. The government's expenditure of the funds involved returns them to the public.

On the other hand, government borrowing from commercial banks, by increasing the total amount of money in circulation, is likely to raise the otal level of spending; in times when resources are fully employed and production cannot be expanded to meet the increase in the level of spending (as in time of war), price inflation inevitably will result. Government expenditures financed by borrowing from private individuals and nonbanking corporations, on the other hand, will not have much effect upon he total level of spending. Of course, if some of the individuals or corporations buying bonds would not otherwise have spent the funds involved, the effect is to increase aggregate spending, rather than to substitute government for private spending.

Conversely, repayment by the government of obligations held by commercial banks ordinarily involves the extinction of purchasing power. Suppose that the government increases personal tax rates and uses the added revenues to pay off its indebtedness to banks. Then demand deposits of private individuals are transferred to the government and thence to the banks which created them in the first place. Unless this operation promotes ncreased bank loans to nongovernmental borrowers, which is not likely, he net effect is to extinguish the government's debt, on the one hand, and an equivalent amount of bank deposits, on the other. In so far as the income-ax payers affected would otherwise have spent the money used for paying axes, this operation tends to reduce the total level of spending and hence s deflationary. Repayment of government obligations held by private individuals, however, merely transfers funds from taxpayers to bondholders, with no net change in the aggregate supply of money held by the public.

To summarize, the Treasury's policies in managing the debt cannot help but influence the supply of bank credit—that is, of money. If the government must borrow, bank borrowing is likely to be inflationary, whereas oans from the public have slight if any effects upon the money supply. Conversely, the repayment of debt to the banks will reduce the money upply, while the redemption of obligations held by the public is neutral as to its effects. But we can go further than this, for debt-management policy can become an instrument for controlling the money supply. Even when he budget is balanced, for instance, the Treasury can expand the money upply by borrowing from the banks to repay the public; and can contract he money supply by a converse process.

Certainly, if the government desires to finance a budget deficit without increasing the supply of money in active circulation, it should borrow from individuals and nonbanking corporations. Such a policy, however, will succeed only to the extent that government spending is substituted for private spending which otherwise would have taken place. If some of the funds lent to the government otherwise would not have been immediately spent or lent, the amount of money in active circulation will be increased.

THE PUBLIC DEBT AND THE RATE OF INTEREST

It was argued above that the most obvious burden of the public debt comes from necessary transfers of money from taxpayers to bondholders in payment of interest. For a debt of any given size, the interest burden depends upon the rates of interest at which the government has been able to borrow. Under normal circumstances, however, the federal government has some degree of control over the prices (rates of interest) it pays for loans. These rates influence in turn the rates charged on loans to other borrowers. For this reason, policies relating to the rate of interest on the public debt affect the entire economy.

To understand the connection between debt management and interest rates, it is necessary briefly to consider the essential functions of interest in an economy such as our own. We may regard interest as the price paid for the use of money. Interest rates vary mainly according to the length of time for which money is borrowed and the credit of borrowers (i.e., the degree of uncertainty as to whether a borrower will meet interest and principal payments when due). The essential function of interest may be grasped easily by considering what would happen if interest rates were zero, and the only restriction upon borrowing were the necessity of repaying amounts borrowed. Under such circumstances, we would expect people to borrow and spend freely for investment purposes, with the result that prices would be driven up and there would be general inflation. One important function of interest, therefore, is to restrict the demand for loans, and consequently the volume of expenditures financed by borrowed money.

Another important function of interest is to induce persons and corporations possessing loanable funds to lend them. Conventional economic theory long held that the function of interest, as it related to the supply of funds, was to induce people to save, i.e., that interest is essentially a payment for abstaining from consumption. It is generally agreed now that the main determinant of savings, in the short run at least, is the level of income

ather than the level of interest rates. In other words, people's savings are ;overned primarily by their incomes. Yet the proportion of their savings hey will lend depends upon the level of interest rates. If the interest rate vere zero, there would be no inducement to lend, and money would be upplied only if people were compelled to lend, or if the government stood eady to create and pass out money to anybody who could demonstrate his bility to repay the sum borrowed.

Now assume again that the federal government's budget for some ›eriod calls for a certain amount of deficit spending. The way to minimize he debt burden is to borrow as cheaply as possible. At present the federal ;overnment's control over the banking system is such that it can specify he rates of interest which it will pay to the banks; in fact it would be ›ossible for the government to give the banks noninterest-bearing paper noney, instead of bonds, in return for deposits. So we may ask if there is ny reason why the federal government should not set interest rates at ery low levels in order to minimize its cost of borrowing.

As a matter of fact, the federal government has kept interest rates low ›ver the past fifteen years. Yet it is by no means clear that the govern-nent should always seek to borrow at the lowest possible rates of interest, ›r that its policy in the past has always been wise. For if the rates set by the 'ederal government are too low, the public may continue to save, but it vill not want to lend its savings—even to the Treasury—for such a niggardly 'eward. If the public refuses to buy government bonds, the government will ›e able to borrow only from the banks. Borrowing from banks, as we have een, adds to the total stock of money and tends to increase total spending.

At times when the level of total spending is lower than that commen-urate with full employment, this may be a desirable result. But at times vhen total spending tends to exceed the total supply of goods and services 'or sale, government borrowing from banks may be highly undesirable. Consequently, if the government is compelled to engage in deficit spend-ng, and if at the same time it is desirable not to increase the level of total spending, the government will be in a dilemma. If it pays interest rates high enough to attract needed funds from individuals and nonbanking corpora-ions, thus curtailing private investment and consumption expenditures, the nterest charges on the debt, and consequently the burden of maintaining t, may become oppressive. If, on the other hand, the government sets in-erest rates too low to attract all the needed funds from nonbanking lenders, t will be forced to borrow from banks, thus increasing the supply of money ınd promoting inflation. Thus the advantages of keeping both interest rates

and the cost of maintaining the debt low have to be balanced against the disadvantages of inflation. This is the dilemma faced by the federal government in financing World War II.

THE DANGER OF PUBLIC BANKRUPTCY

During the 1930's, we have seen, the rising national debt evoked many gloomy prophecies of public bankruptcy; at that time many people were more alarmed at a $60,000,000,000 debt than they were in the 1940's at a $260,000,000,000 debt. Applied to affairs of government, the term "bankruptcy" has no precise meaning; broadly speaking, it suggests a condition in which a government is unable for some reason to meet interest or principal obligations on its outstanding indebtedness and is unable to borrow any more money. "Bankruptcy" should be distinguished from "repudiation": bankruptcy is the inability, repudiation the refusal, to meet contractual payments on outstanding indebtedness. Some American municipalities have at various times been bankrupt, in this broad sense of the term, and some American state governments have repudiated obligations held by foreign investors. However, there is little reason to fear that the federal government will go bankrupt, still less that it will repudiate its debts, in the foreseeable future. Inability to meet interest and principal payments ordinarily is due to the inability of the debtor government to collect sufficient taxes, or in cases of debt held by foreigners, the inability to make payments in foreign currency. Where the public debt is internally held, as in the United States, the latter problem does not arise, and bankruptcy cannot occur as long as the government is able to transfer the necessary sums from taxpayers to bondholders. Since most bondholders are taxpayers, and since interest on most outstanding federal obligations is subject to the federal income tax, a rising debt pays its own way to some extent by creating taxable income.[1]

Although transferring income from taxpayers to bondholders creates frictions of various kinds, as has been previously pointed out, such frictions have been a relatively minor problem even with national debt at its present size. In 1948, total interest payments on the national debt equaled about 2½ per cent of total income payments to individuals. How high the percentage would have to be before the transfer problem became intolerable is problematical, but reputable economists have conjectured that as much as 20

[1] It has been estimated that about 25 per cent of the interest payments on the present federal debt is recovered by federal income taxes.

to 25 per cent of the national income could if necessary be transferred in this way without bankrupting the Treasury.

The burden of the debt, as has been pointed out, depends to a considerable extent upon the level of the national income. If the national income were to fall precipitously within the next few years, as it did for instance between 1929 and 1932, the ratio of debt interest to income payments at which the burden of the debt became intolerable might be much lower than if the national income continued to rise. This is because when incomes are low taxpayers have less income left after paying debt service charges than they have if incomes are high.

DEFICIT SPENDING FOR WAR

Modern war calls for the expenditure of vast amounts of money by governments waging it. These amounts of money correspond to and call forth the enormous energies for purposes of destruction. Financing a war poses many financial problems, the chief of which is the avoidance of inflation. This is contrary to the popular notion that the chief problem of finance in wartime is to obtain the vast amounts of money required. The experience of all modern wars shows that the creation of money is by far the easiest task facing a belligerent government; no nation has ever lost a war because of a lack of money to spend within its borders, although nations may have lost wars because they could not buy abroad.

That a government can get the money it needs for war can be demonstrated by a few figures. During 1939, the year war broke out in Europe, the gross national product—the market value of all the goods and services produced in the American economy—was approximately $90,000,000,000.

Table 24 **GROSS NATIONAL PRODUCT AND FEDERAL EXPENDITURES AND RECEIPTS, CALENDAR YEARS 1939-1946**

(in billions of dollars)

Year	Gross notional product	FEDERAL GOVERNMENT Total expenditures	War expenditures	Net receipts	Ratio of receipts to expenditures
1939	90.4	9.0	1.3	6.7	74%
1941	125.3	20.5	13.8	15.7	77
1943	192.6	86.0	80.4	39.3	46
1944	210.6	95.6	88.6	42.0	44
1945	213.1	84.9	76.2	43.1	51
1946	203.7	24.4	21.0		

Of this amount, government expenditures for military purposes comprised less than $1,000,000,000.

During subsequent years, federal expenditures for war and defense mounted astronomically, as shown by Table 24; in 1943, 1944, and 1945, the amounts spent for war and defense almost equaled the value of the entire gross national product of 1939.

WAR FINANCE AND INFLATION

The Revolutionary War, the Civil War, and World War I all were accompanied by price inflations which seriously disrupted the economy, imposed crushing burdens upon fixed income groups, and were followed by postwar depressions. But these wars were characterized by the unwillingness or inability of wartime Congresses to impose sufficiently heavy taxes and consequently by the resort to monetary inflation. The Continental currency of the Revolutionary War and the greenbacks of the Civil War became famous symbols of inflation; the monetary inflation of World War I was achieved primarily through expanding bank credit. At the outset of World War II, therefore, economists realized that Spartan measures would be necessary to get through the war without creating undue inflationary pressure. They urged that the war be financed largely by taxes and loans from nonbanking sources, such loans if necessary to be put on a compulsory basis. As on previous occasions, however, Congress hesitated to levy the taxes necessary to mop up inflationary purchasing power. As may be seen from Table 24, during the war years proper the federal government's receipts never amounted to much more than 50 per cent of its expenditures. The excess of expenditures over receipts, of course, could be made up only by borrowing.

Lacking a tax program adequate to finance the government's wartime expenditures, or at least a major part of them, which would at the same time have drained excess purchasing power out of the hands of the public, the Treasury attempted to accomplish the same purpose by inducing the public to purchase bonds, in the hope of obviating the need for borrowing from banks and thus expanding the supply of money. Special types of bonds, tailored to fit the needs of particular investors such as insurance companies, were issued. Individuals could purchase war savings bonds offering both the advantage of a high interest rate and the advantage of a guarantee of redemption on demand. Other war bonds, paying slightly higher rates of interest than usual, were made available for purchases in limited amounts by corporations as well as by individuals. In order to keep

bonds from being sold to commercial banks or pledged as collateral for bank loans, which would have had the effect of expanding the aggregate supply of money, the government restricted commercial bank ownership of many of the wartime bond issues.

To induce the public to buy bonds, tremendous sales campaigns were staged, sparked by dignitaries, movie stars, and returned war heroes. Despite all the high-pressure salesmanship and exhibitions of valor and pulchritude, however, the nonbanking public could not be persuaded to buy sufficient bonds to meet the government's deficit, and the government was forced to resort to the ancient device of inflating the supply of money—by borrowing from the commercial banks.

The types of investors acquiring the government's obligations of indebtedness and the extent to which the banking system participated in financing the defense and war deficits, are shown in Table 25.

Table 25 INTEREST-BEARING OBLIGATIONS OF THE UNITED STATES GOVERNMENT, BY OWNERSHIP, 1939 AND 1946

(in billions of dollars)

	Dec. 31, 1939	Dec. 31, 1946
Held by banks		
Commercial banks	15.9	73.0
Federal Reserve Banks	2.5	23.9
Total	**18.4**	**96.9**
Held by private nonbank investors		
Individuals	9.8	64.1
Insurance companies	6.3	25.4
Mutual savings banks	3.1	11.9
Other corporations and associations	2.6	23.0
Held by governments		
State and local governments	0.4	6.2
Federal government agencies and trust funds	6.5	31.2
Total held by all investors	**47.1**	**258.6**

It will be noted that the debt held by banks increased from $18,000,000,000 to nearly $97,000,000,000. This was tantamount to an increase in the monetary supply of at least this amount, since it represented the net creation of deposits. In the meantime, the country's supply of money increased as shown in Table 26.

Table 26 THE MONEY SUPPLY OF THE UNITED STATES, 1939 AND 1946

(in billions of dollars)

	Dec. 31, 1939	Dec. 31, 1946
Currency outside banks	6.4	26.8
Demand deposits	29.8	83.6
Total	**36.2**	**110.4**
Time deposits	27.1	54.0
Total deposits and currency	**63.3**	**164.4**

These figures show that the supply of money (demand deposits and currency) tripled between 1939 and 1946, largely by reason of increases in bank holdings of government debt. The aggregate value in 1939 prices of real goods and services produced, however, was probably not more than 50 per cent higher in 1946 than in 1939. Although inflationary pressure is created by the spending, rather than the creation of money, the creation of so much excess money stimulated a good deal of excess spending. The figures relating to the increase in the supply of money, however, do not give the whole picture of the inflationary potential. Time deposits, while not immediately spendable in the sense that demand deposits and currency are spendable, can be quickly converted into cash, and time deposits increased by approximately $27,000,000,000 between 1939 and 1946. In addition, the federal government's policy during and after the war was virtually to guarantee to every purchaser of bonds that he could dispose of the bonds with no loss of capital, that is, that the government would support the price of all marketable bonds. There were two main reasons for this policy: first, the government by keeping bond prices up could keep yields down and hence minimize the cost of maintaining its huge debt; secondly, private investors naturally would be much more willing to purchase bonds if assured against loss.

This assurance of liquidity was made even more specific in the case of the nonmarketable war savings bonds which the government contracted to redeem at the demand of the purchasers. The assurance to private holders of government bonds that their bonds can be marketed at any time without loss makes such bonds nearly the equivalent of cash and hence adds still more to the inflationary potential.

The wages of financial sin, as demonstrated during and after World War II, have not changed very much since the Revolutionary War, the Civil War, and World War I.

The Continental Congress lacked both the power and the will to levy ıxes to finance the Revolutionary War and resorted to printing wagon-›ads of currency. The inflations which resulted from the Civil War and :om World War I were much more moderate. At the time of World Var II the federal government doubtless had the power to carry through a ıx program sufficiently rigorous to limit any inflation to minor dimensions. :ongressional hesitation in voting such a program was due partly to con-icting pressures exerted by special-interest groups in the economy, partly › a fear of the effects of heavy taxes upon economic incentives, and partly › the age-old belief that borrowing enables the cost of the war to be ıifted to future generations.

Conflicting claims were successful in clouding the issue. Labor groups, ›r example, desired high taxes on profits and upper-bracket incomes, so that ıe tax burden would fall primarily upon the rich; business groups advo-ated sales taxes, which would fall primarily upon the lower-income groups. ıdustrial groups brought pressure to bear for concessions to their par-cular industries. Thus the inability of various groups to agree as to how ıe tax burden should be distributed was an important reason for failure › enact an adequate tax program.

In addition, Congressmen and other policy-makers were concerned as › the possible deleterious effects upon incentive and morale of a tax pro-ram which would yield enough revenue entirely to finance the war. Such program would have required that the proportion of taxes taken out of ıcome be more than doubled. The experience of other nations indicates ıat there is some valid reason for such concern. At any rate no nation has ver been able to finance a war solely by taxation. On the other hand, :anada and England both levied higher taxes during World War II than id the United States, with the result that both were somewhat more suc-ɛssful in controlling inflation than was the United States.

Finally it still is argued that, if a war is financed by borrowing, a corre-›onding portion of its cost can be shifted from the wartime generation to ıture generations. In a strictly financial sense, looking at the matter only ·om the viewpoint of the national treasury, this thought may be justified. or the nation as a whole, however, the economic burdens of war arise rincipally from the shortage of goods and services and the need to work ›nger hours at unfamiliar occupations *while the war is still in progress.* 'hese burdens must be shouldered whether the war is financed by taxing

or by borrowing. There is one exception to this rule: if the borrowing is done abroad, war generations may relieve the current pressure upon their economies and, by obligating their descendants to pay back the loans, shift the burden. Plainly this possibility had no application to war finance in the United States during World War II.

Such were the reasons the United States Treasury in fact resorted to large-scale borrowing to finance its wartime needs. But, as we have seen, the inflation was caused in the main not by borrowing as such, but by borrowing from the banking system. Could the Treasury possibly have obtained the whole of the money it needed from nonbanking lenders, i.e., from the general public? As already explained, one possible way of persuading people to lend more would have been to pay them more for lending, i.e., to raise the rate of interest upon government securities. This device was favored especially by financial groups and others who stood to profit by higher interest rates, but the idea was opposed by the Treasury on the grounds that it would vastly increase the carrying charges on the public debt, and that this would more than offset any benefits involved.

The average rate of interest on the federal debt outstanding as of the end of 1948 was approximately 2.2 per cent. What rate would have been necessary to get the public to lend enough to keep down inflationary pressure is a matter of conjecture. Perhaps no rate within reason. Probably it would not have been less than 6 per cent; and this would have increased the carrying charges on the debt very substantially. Moreover, although inflation might have been averted, this would have resulted in a smaller national money income, so that the ratio of debt charges to income might have been much higher.

The fact that inflation continued in the United States and other countries long after the collapse of Germany and Japan suggests that postwar, as well as wartime, financial policies may have proved inadequate. In particular, it has been claimed that the decline in military expenses should have facilitated the development of budget surpluses and the repayment of debt. Most often, pressures for the remission of wartime taxes proved irresistible. In some European countries the mechanism for collecting taxes had been impaired by occupation. In the United States there was strong sentiment that wartime tax rates should not be continued in peacetime. Such tendencies reduced the prospect of an early cessation of inflationary movements.

[illegible]

[illegible] IN THE WORLD ECONOMY

27 The world economy

28 The United States in the world economy: between wars

29 The United States in the world economy: postwar

SECTION EIGHT

OUR PART IN THE WORLD ECONOMY

INTRODUCTION

International trade, in the words of a contemporary writer, "consists of an economic substratum overlaid by a political scum." [1] This description could be extended to all categories of economic transactions conducted across national boundaries: trade in merchandise, the exchange of services, and movements of capital. In any study of international transactions it is important to realize that their "economic substratum" does not significantly differ from that of domestic transactions, or those taking place within one national territory. The various motives which may underlie international transactions and the economic processes which they set in motion, are identical with those which underlie comparable transactions in domestic business.

What distinguishes international economic dealings from domestic, and places them in a distinct category, are certain factors of a political character. In the final analysis these factors stem from the partition of the land surface of our globe into numerous sovereign political units. There is no economic rationale to this partition. The pattern in which political frontiers criss-cross the continents today is the result of historical processes in which economic considerations have played a negligible part.

This arbitrary pattern of man-made political boundaries is superimposed upon the equally arbitrary scatter in which nature has distributed the economic resources of the world—its arable land, deposits of useful minerals, and climatic conditions adverse or favorable to land cultivation and human habitation. Had it not been for political frontiers, the geographical

[1] G. A. Duncan, *International Trade*, London, 1946, p. 58.

distribution of agricultural, mining, and manufacturing production throughout the world would have been determined by the same factors as influence the location of production within a single nation. However, since the existence of political frontiers preceded by many centuries the evolution of the modern world economy, today's pattern of world production and the currents of world trade reflect conspicuously the manifold influences which have emanated from the barriers erected by man on top of the uneven distribution of the world's natural wealth.

More specifically, these man-made barriers have profoundly influenced the world distribution of productive resources other than those supplied by nature. Political factors have helped to shape into differing patterns the population distribution, education, and occupational skills of different groups of mankind. Such differences have led in turn to great variations in the efficiency with which men utilize the natural resources at their disposal. In much the same way, the partition of the surface of the globe into arbitrary political compartments has greatly influenced the distribution of productive capital throughout the world. Furthermore, the social and political organization of national groups makes some more, some less, capable of efficient execution of economic processes.

Each of the compartments called nations or sovereign states has a separate and independent government. As a matter of long-standing tradition, governments have regarded economic transactions between their own citizens and foreigners as a legitimate object of supervision and regulation, according to criteria quite different from those which they apply to domestic transactions, and they have agencies which prepare statistics on "foreign trade."

This category of trade, in a sense, owes its separate existence to surveillance by government of one selected class of business dealings—those in which goods or money happen to cross the national frontier. Nobody thinks of recording in every detail the trade which passes between New Jersey and Pennsylvania, or between England and Scotland. No records were kept of trade between England and Southern Ireland before December 1921. But when at that time Eire became an independent state, a new channel of "foreign trade" came into being overnight. Thus in every country—as well as in the United States, with which we are especially concerned in this book—international transactions comprise an extremely important area of governmental control.

The observation that foreign trade is a product of "national boundaries" is less irrelevant than it seems at first glance. Today we hear a great deal about the desirability of an "expansion of international trade." This ob-

ctive is indeed desirable. However, we must also realize that the need for essing this objective arises only because there is little hope of a demoli- on of those political barriers which cause the order of phenomena called nternational trade."

While frontiers exist, expansion of trade across them would be a sure n that their deterrent effect on the movement of goods and resources is ing reduced, and that fuller use is being made of the opportunities for sing the material living standards of mankind which nature and modern chnology have placed at its disposal. Yet, looking beyond this optimistic ssibility, we should bear in mind that the utilization of the world's re- rces would be even more efficient if there were fewer national frontiers trade to cross, and consequently, perhaps, *less* "international trade" in accepted statistical sense.

Should, for instance, the project of a United States of Europe become lity, we would see a considerable contraction of the statistical total of ods moving in international trade, but at the same time the economic re- rces of Europe would be more efficiently utilized than before. Trade in sent-day Europe very well demonstrates the way in which political ntiers create foreign trade. If we add up the values of all countries' im- ts and exports to arrive at a statistical total of world trade in the pre- r year, 1938, we find that Europe (excluding the Soviet Union) ac- nted for 51 per cent of this total, even though it accounts for only er cent of the land area of the world, and but 19 per cent of the world's ulation.

But Europe's apparent dominance in world trade follows from the fact t this region is more intensively partitioned into small sovereign units n any other part of the globe. As much as 52 per cent of the imports European countries were obtained from Europe itself, while 64 per cent their exports went to European destinations. In other words, well over -half of European foreign trade took place within Europe, across the mesh of its political frontiers, and such trade accounted for more than -quarter of the statistical total of world trade.

Conversely, a study of foreign trade statistics for the two nations com- ing most of the North American continent, the United States and Can- shows that their trade with each other is small in relation to the total world trade—no more than 4 per cent in 1938. Only a small fraction of trade which actually moves on our continent happens to be caught by ted States and Canadian foreign trade statistics. The overwhelming bulk t moves quietly, and without the dubious benefit of statistical recording, ade within and between the forty-eight states of the United States; and

within and between the provinces of Canada. This very absence of political and customs frontiers between the states has been one of the great assets of the American economy, and has enabled it to make efficient use of its vast and varied resources through production and trade untrammeled by political barriers.

The exercise by governments of their traditional right to regulate trade between their own and foreign territories by levying import or export duties, imposing conditions and restrictions upon payments crossing the frontier, and in many other ways, by no means exhausts the impact of political boundaries on international economic transactions. Actions and policies of national governments are aimed explicitly and deliberately at the control of economic intercourse between their own nationals and foreigners. But parties to international transactions must also reckon with many incidental by-products of the fact that they reside in territories whose laws and institutions are different. In this regard international business contrasts directly with domestic business, in which all transactions are governed by one uniform "law of the land."

Some of the most important repercussions upon economic transactions which happen to cross national frontiers result from the separate monetary systems maintained by governments. The issue of currency and administration of the national monetary system are among the more important manifestations of political sovereignty. The existence of such separate monetary systems greatly complicates the business of selling, buying, lending, or borrowing when these operations require the mutual conversion of different currencies. Such operations give rise to problems of stability for domestic economies quite disproportionate to the scale of the operations themselves.

Many other aspects of national policy and legislation which we are inclined to regard as matters of purely domestic concern have repercussions upon the external transactions of a country, and through them upon the economies of other nations. The credit, price, wage, or employment policies of one nation, even though its public and its law-makers may conceive them as strictly domestic affairs, all have repercussions beyond the border. Conversely, the domestic economic policies of foreign nations may produce effects upon our own economy. Study of international economic transactions, as a special category of economic analysis, has to be concerned with these manifold repercussions, deliberate or incidental, of domestic policy on the external transactions of national economies. It must be equally concerned with the various ways in which external relations affect the domestic economy and transmit to it the effects of economic conditions and policies abroad.

CHAPTER TWENTY-SEVEN

The world economy

WHY FOREIGN TRADE?

Since Adam Smith and his followers launched their attacks on the mercantilist doctrine, it has been customary to approach the subject of foreign trade by asking whether a nation trades with others primarily in order to sell its goods abroad or primarily in order to import foreign products. The mercantilists thought that gain from foreign trade accrues only to the nation which exports more than it imports. For the mercantilists a "favorable balance of trade" was the only tangible gain which a nation can derive from foreign commerce. Since they regarded exports as the vehicle which brought "treasure" into the country and thus added to its wealth, they prescribed economic policies designed to maximize exports and confine imports to goods needed by domestic industry and those which could be re-exported at a profit.

The "free traders" challenged this assertion of the primacy of exports over imports and declared that a nation is compelled to export only in order to be able to import. By importing, it acquires foreign goods which it needs but cannot itself produce, or can produce only at a higher cost than other nations. For these goods a nation has to pay by exporting a portion of its national product. In order to make the best of foreign trade, it must endeavor to obtain its needed imports in exchange for the smallest possible amount of exported goods. By indiscriminately promoting its exports, a nation stands to lose and not to gain, and it will lose inevitably if it persists in selling more to foreigners than it buys from them. An export surplus is not a "favorable" feature as claimed by the mercantilists, but an indication that the nation is handing over to foreigners a portion of the product of its labor without obtaining useful goods in return.

NATIONAL SPECIALIZATION

Once acquisition of imports had been shown to be the true object of foreign trade, it was not difficult to point out how a nation could set about obtaining its imports at the lowest possible cost in terms of its own products and so derive the maximum advantage from foreign trade. If every nation would freely admit foreign products to the domestic market, international competition would soon enable each nation to determine what products it could advantageously produce itself; it could also identify products in which the advantage of low production cost rested with other countries. High-cost domestic industries would be forced out of business, and their markets captured by imported goods. The same test of competition would determine which industries were efficient enough to prevent displacement of their products by foreign goods in the home market. Finally it would identify the nation's most efficient industries: those whose costs were low enough to outsell foreigners in the latter's own markets—in other words, industries qualified to produce for export.

Foreign commerce under free international competition would thus bring about an optimum distribution of the nation's productive resources. To see why this is so, consider a nation about to remove mercantilist restrictions on its foreign trade.

Elimination of the least efficient industries by foreign competition will release labor and capital previously employed in a wasteful fashion and make it available for alternative employment. These displaced resources will be absorbed, and put to more productive use than before, in employment opportunities which competitive foreign trade will have opened up in the nation's most efficient industries; these can now expand to produce for export, over and above the needs of the home market.

As a producer, the nation will benefit by having more of its resources utilized in highly efficient production, while as a consumer it will enjoy the advantage of cheap imports. Its economy will have become *specialized:* instead of trying to produce all the things it needs, it will focus its effort on those industries where it enjoys a competitive advantage over foreign countries. Since these countries will do likewise, national specialization will be paralleled by *international division of labor.* This is a condition in which each nation does the things at which it is most adept, with the result that each nation's resources, and therefore those of the world as a whole, will be more efficiently utilized.

)OES THE GAIN FROM TRADE LIE IN IMPORTS?

The free traders' emphasis on imports as the prime object of foreign rade is fully justified if we regard the nation as an entity, and assume the xistence of a social motive behind the aggregate of its external transactions. This assumption is evidently an abstraction if we think of a country like he United States, where free enterprise predominates as the form of busiess organization at home and where economic transactions with foreigners are typically conducted by private business firms.

American imports and exports are alike made up of innumerable indiidual deals motivated by individual decision. There is no co-ordination etween these transactions, and the American exporter sells to foreign buyers ot because he is concerned to enhance America's ability to obtain imports, ut because exporting is his business and he expects to earn a profit on each ansaction he undertakes. From his standpoint, exporting does not call for istification by reference to imports or any other consideration. What goes or the individual American exporter holds good for entire industries, some which are accustomed to dispose of a considerable part of their products foreign markets. Exports of American cotton accounted for nearly one-ird of total cotton production before World War II, and thousands of mericans obtained employment and incomes from exported cotton. The eady decline of cotton exports in the 1930's (from an annual average of 500,000 bales during 1924-29 to one of 5,400,000 in 1936-39) did bring rdship to cotton growers in the South and meant unemployment or reiced earnings for others engaged in the cotton trade.

E IMPORTANCE OF EXPORTS

All this indicates that once national specialization has taken place, and ources have become committed to production for foreign markets, exrts cannot be regarded as simply a necessary means of paying for imrts. It is inherent in a system of international division of labor that a ion participating in world trade becomes dependent on export sales for posing of a portion of its national product, and for providing a part of national income. A temporary or permanent contraction of foreign dend for its export products will have repercussions upon its domestic ine and employment levels; they will be more or less severe depending the extent to which a national economy, or selected industries within it, involved in foreign trade. Evidently such repercussions will be more in-

tense and widespread if a large portion of a nation's labor force and other productive factors are employed in producing for foreign markets. An economy like that of Great Britain, which before World War I exported about 40 per cent of its total industrial production, will be more vulnerable to dislocation through external influences than that of the United States, where the corresponding percentage was about ten.

Additional vulnerability may result from excessive specialization in production; "single crop" economies, whose exports consist of one or a very few primary commodities, are more likely to suffer dislocation than countries with diversified export structures. The extent to which a decline in exports will cause domestic unemployment and loss of income will also be determined by the ease or difficulty with which productive factors, employed in making goods for foreign markets, can be shifted into alternative employment. To be sure, a nation may have good reason for striving to maintain its exports at a high level in order to preserve a given pattern of employment—a pattern previously established by specialization for export. Yet we must steer clear of the fallacy of assuming that the promotion of exports is a useful method for a nation to "create employment" or that it can advantageously find markets abroad for an alleged "surplus" of production.

Exports have no such magic virtues. If national resources are fully employed, additional exports (if they were possible without additional imports, which in the long run they are not) would lead to inflation. If there are unemployed resources, they could of course be put to work by artificially stimulating the foreign demand for exports—for instance through export subsidies or loans to foreign countries. But export promotion would do nothing that could not be accomplished by additional expenditures at home to stimulate consumption; the sole difference would be that, if export promotion is resorted to, the enjoyment of the products of re-employed resources would accrue to foreign instead of native consumers.

Finally, in appraising the contribution of exports to the national income we must never neglect the test of comparative efficiency proposed by the "free traders." If industries which are not among the nation's most efficient are kept in the export field—say, by subsidies—it will always mean that the country is not taking full advantage of the opportunities presented by international division of labor for maximizing its income. In such a situation the incomes of inefficient industries are being supplemented by subsidies that in the final analysis are exacted from the incomes of more efficient producers.

LTERNATIVE OBJECTIVES

So far we have discussed the merits of international trade in terms of e opportunities which it provides to a nation to minimize the economic gnificance of its political frontiers, and to organize its production accord-g to the criterion of maximum efficiency, in order to realize the greatest ssible national income. On the assumption that maximization of the na-nal income, regardless of any other considerations, is the exclusive aim national economic activity, the prescriptions of the free trade doctrine nich we have briefly outlined above are flawless. It is by allowing compe-ion to determine the pattern of world production that the opportunities ered by nature and modern technology can be most efficiently mobilized make available the greatest possible aggregate of goods for the satisfac-n of man's material wants.

However, purely economic objectives have never exclusively or even edominantly determined the attitudes of governments toward interna-nal trade. In dealing with the realities of today's world economy we must ognize that it has been shaped under the influence of policies unrelated the aim of maximizing incomes.

National security. Adam Smith himself conceded that "defense is more portant than opulence"; he granted that considerations of national se-ity have to enter into the determination of foreign economic policies. ese considerations inevitably militate against the policies which would l to maximum wealth. International division of labor implies dependence foreign nations for vitally important goods, and often dependence on dis-t sources of supply which may become inaccessible in wartime. Speciali-on may conflict with security if it prevents a nation from maintaining ntegrated industry capable of producing all the requirements of warfare. ional security has generally led nations to stress self-sufficiency, or the t possible degree of dependence on foreign countries, as a major ob-ive of public policy. Pursuit of this objective has led to many and signifi-t deviations in the pattern of world production from that ideal form ch would be indicated by the criterion of maximum efficiency.

World War II seems to have demonstrated the limited value of the sufficiency concept in present-day conditions. For the war ended in the at of Germany, the very power which had most systematically pro-ed "autarky" in peacetime. Especially during the 1930's high-cost in-ries producing substitute materials were fostered by the Germans. They went to the length of attempting to restore Germany's ability to feed

itself from its own soil, an ability which it had lost during earlier decades of specialization for international trade. The war was won, on the other hand, by nations which had not cultivated self-sufficiency to nearly the same extent, but which during the war retained access to most of their accustomed sources of raw materials and continued to benefit in their war production from the advantages of foreign trade.[1]

Internal stability. Public policies affecting external transactions must also take into account their effect upon business conditions at home. The Great Depression brought home to every trading nation the lesson that world trade may spread prosperity in good times, but becomes an international carrier of depression when the tide turns. Factors which we have yet to examine made it appear impossible to national governments to combat depression effectively without insulating their economies against deflationary influences introduced from abroad through external transactions.

The maintenance of internal economic stability, if necessary at the cost of foregoing some of the benefits of the international division of labor, came to determine the attitude of most governments towards foreign commerce. Only through the bitter experience of the depression years, and the subsequent period which saw a partial disintegration of the world economy, was it realized that the objective of internal stability need not be inconsistent with the objective of adding to the national income by foreign trade. Indeed, it required the additional experiences of a world war for the recognition to gain ground that this apparent dilemma can be solved by intergovernmental co-operation and the application of mutually consistent domestic and external economic policies.

THE WORLD ECONOMY: TECHNOLOGY AND WORLD TRADE

That complex network of commodity flows, exchanges of nonmaterial services, and international capital movements which is described by the summary term "world economy" is the product of a relatively recent past. Throughout the recorded history of mankind international trade had established points of contact between separate states. However, the contemporary pattern of close economic interdependence, embracing virtually all the inhabited regions of the globe, has evolved only during the past century.

[1] The Soviet Union was no exception in this respect. While it was highly self-sufficient before the war, and its wartime foreign trade—in a formal sense—was very small, its war effort was decisively assisted by some $10,000,000,000 of United States Lend-Lease aid, and received substantial assistance also from Great Britain and Canada.

dern technology made this kind of world economy necessary as well ɔossible.

The Industrial Revolution created an unprecedented need for bulky materials and for foodstuffs to maintain the growing urban populations countries where industry progressively encroached upon agriculture. ther food nor raw materials could have been supplied without the adt of cheap, fast, and reliable transportation by land and sea. The machine bred new problems of long-distance freight transportation, of comıication between buyers and sellers in widely separated markets, and of ɜerving perishable commodities in transit. Technology meanwhile proːd solutions for these problems by making available railroads, steamɜ, fast mails, telegraph and radio, refrigeration, and many other invenɜ; thus world commerce was enabled to meet the manifold needs created the adoption of large-scale methods of industrial production.

WORLD ECONOMY: ENGLAND'S FOCAL POSITION

The lead gained by England in the nineteenth century as the world's most industrial nation was paralleled by its focal position—even more ıounced—in the developing network of world commerce. British indushad to rely on imports for most of their raw materials, since the British themselves could furnish little besides coal and iron toward their everving needs. Even more important in making Britain the focus of world ɛ was its dependence on imported foodstuffs. This dependence devell in consequence of the unique manner in which the British in practice ied the principle of national specialization and their wholehearted paration in the international division of labor.

The British economy had begun to specialize much earlier, but the ːy reached its culmination with the repeal of the Corn Laws in 1846. use of the far-reaching consequences of the British decision to abandon ːultural protection, we may justly date the birth of the modern world omy from this event. A few years prior to the repeal, British agriculhad produced nine-tenths of the country's food requirements. But once sed to the competition of foreign grain, farming in Great Britain emɛd on a steady process of contraction. By the end of the century, food ːome to occupy a larger place in British imports even than raw materials. British consumers benefited immensely from their access to cheap food countries where land was plentiful, and so did British industry. Howdependence on foreign food as well as industrial materials also made in highly vulnerable to dislocations of her overseas supplies—such as

occurred in two world wars. Yet, until after World War I, Britain had no occasion to regret or reverse its decision to specialize, for it enabled the nation to exploit fully the natural advantages offered by coal and iron resources and a favorable location, as well as the head start which it had gained in the industrial race. As a result of importing food and exporting manufactures, living standards of the British population rose to levels which would have been unattainable in the absence of specialization.

GREAT BRITAIN AS AN OPEN MARKET

Toward the end of the nineteenth century other industrial nations emerged to challenge Britain's position of leadership in world trade; yet Britain remained the biggest export and import market within the world economy until 1914, and the world's biggest importer through the interwar period. What made Britain's dominant position in world trade even more important was the fact that up to the time of World War I, and substantially until 1931, the British market remained open to the entry of foreign goods, unhampered by import duties or other restrictions.

Even while Britain's competitors in world trade, Germany, France, and the United States, were protecting their industries and agricultural producers by tariff barriers, many foreign producers could always sell in the British market. By this means, they could acquire British currency, which had world-wide circulation as an international medium of exchange. When we come to consider what prevented the world economy from functioning as smoothly after World War I as before, we shall find among the underlying causes the failure of any country to perform the function which Britain had performed before 1914. Britain itself turned to protection and ceased to be an open market. Its role as the biggest national factor in world trade has now been assumed by the United States, whose tariff policy severely restricts the entry of foreign manufactured and agricultural goods to the domestic market.

INDUSTRIAL NATIONS AND PRIMARY PRODUCERS

As the nineteenth century drew to a close the world economy still revealed a fairly simple pattern, characterized by a clear-cut division of labor among highly industrialized economies exporting predominantly industrial products on the one hand, and nations or colonial regions exporting primary products almost exclusively on the other. These primary products—raw

terials and foodstuffs—were sold to the industrialized nations, from which primary producers in turn imported manufactures.

The basic heavy industries, such as coal mining and steel, and a steadily panding range of manufactures, were quite predominantly located in rthwestern Europe. This region could fairly claim the title of the "world's rkshop" even after the United States had grown into a major industrial wer, for American industrial expansion had been closely geared to the ds of its own domestic market. The European "workshop," with Britain its major component, radiated its demand for raw materials and food-ffs to all quarters of the globe, and this demand was met by countries ose economies had been molded in patterns complementary to those of ustrial Europe. In producing primary commodities for export, the latter up of countries possessed advantages, in the shape of plentiful land, min-l resources, or climatic conditions not available in Europe. In return for ir exports, the "workshop" furnished them with manufactured goods, ich its superior resources of productive capital and technical skills could vide at low cost.

The extent to which the emergence of this basic pattern in the world-le division of labor was stimulated by the colonial policies of European erial powers is debatable. Undoubtedly such policies deterred industrial elopment in many regions where its economic prerequisites gradually be-ıe available. However, even independent countries tended to specialize rimary production for foreign markets: for instance, most of the Latin erican republics. This shows that the development was something more ı an aspect of European imperialism. Possibly such specialization was a essary first step toward the emancipation of economically backward re-ıs, and their eventual adoption of more advanced and more highly inte-ed patterns of economic development.

INDUSTRIAL RISE OF THE UNITED STATES

The rapid rise of a powerful and fully integrated industrial system in United States came to exert an increasingly important influence upon world economy, but did not at first significantly modify the basic pat-just described. Despite the progressive emancipation of the United s from dependence on European manufactures, as the nineteenth cen-advanced, the American economy continued to export raw materials foodstuffs. It continued, that is to say, to perform a function in the d economy similar to that of primary-producing countries whose do-ic economies were less fully developed. Well into the 1880's Europe still

absorbed four-fifths of United States exports, which still consisted predominantly of grain, meat products, cotton, and tobacco. However, from the 1890's on, the American foreign-trade structure was rapidly transformed under the stimulus of domestic industrial growth.

The year 1898 marks a turning point, for it was the first year in which the United States exported manufactured goods to a greater value than it imported, and it also was the first year in which imports of raw materials exceeded those of finished manufactures. These were the signs of industrial maturity. During subsequent decades the trend continued. American imports shifted increasingly toward raw materials, unprocessed foodstuffs, and semimanufactures, while the expansion of American exports of manufactured goods steadily encroached upon the share of farm products in the export total. At the same time, the emergence of the United States as a major factor in world trade introduced a further differentiation of functions among the various economic regions making up the world economy.

DIRECTIONS OF AMERICAN TRADE: IMPORTS

The United States, in contrast to northwest Europe, had rich and varied mineral and agricultural resources to furnish many of the raw materials for American industry. But it was necessary to import many vegetable products grown under climatic conditions not present in North America (rubber, jute), and products whose cultivation required so much labor relative to other resources as to become unprofitable in an economy where labor was less plentiful and more expensive than elsewhere. Most of these commodities came from tropical regions, which met the requirement of climate and also that of cheap labor supply, since their population densities were generally high and labor plentiful.

Chance accentuated this dependence on supplies from the tropics; for example, they produced tin, one of the few important minerals with which nature had failed to endow the American subsoil. Unlike the industrial nations of Europe, the United States continued to produce its own requirements of staple foodstuffs, despite the growth of domestic manufacturing. Yet the diffusion of high standards of nutrition among a population expanding in numbers and wealth led to an increasing demand for foodstuffs which could not profitably be produced domestically. These, too, were mostly tropical products. The addition of increasing quantities of coffee, bananas, cocoa, and other such items to American menus measured the growth of our dependence upon imports from the tropics.

Finally, America's diverse and variegated manufacturing industry, nulated by increasing demands and protected by the steady upward nd in the tariff between 1861 and 1930, became increasingly able to satisfy : domestic demand, even for the most complex and highest-quality mer- ındise. In this manner the capacity of the American market to absorb for- n—and especially European—manufactured goods was steadily reduced.

ECTIONS OF AMERICAN TRADE: EXPORTS

A quite different set of factors governed the destinations of American orts. Europe remained a large market for American foodstuffs and raw terials, even though its share in the total of American exports was steadily ing. By the late 1920's, nearly one-half of all United States exports was l being absorbed by European countries. This meant that American agri- ture remained specialized to meeting the demands of the urban con- ıers of western Europe for foodstuffs, and of European industries for ton, tobacco, and other materials. However, a rising proportion of Amer- ı exports of manufactured goods was being absorbed by non-European :kets.

Some of these manufactures went to tropical countries whence Amer- ı imports came; but in even larger measure our non-European customers :e countries of temperate climate from which we purchased little. In- ısingly active demand for American manufactured goods came from ıada, Australia, and other British Dominions and from the nontropical ntries of Latin America. Economic conditions there resembled those of United States. In most of these countries labor was scarce and natural ources were plentiful. As a consequence it was profitable to employ or-saving equipment in farming, mining, and other industry. Too, dis- sal of populations and long distances presented transportation and com- ıications problems familiar to Americans.

Countries in the above groups came to rely increasingly on American ıstry, in preference to European, for their imports, especially of capital ipment. American equipment was directly suited to their specific con- ons and needs. In addition, American manufacturers enjoyed competitive ıntages over European producers. They made farm equipment, trucks, ımobiles, and construction machinery for a vast domestic market. Effi- t methods of mass production enabled them to undersell their European petitors.

The tropical regions, by contrast, offered few opportunities for export ıose products in the manufacture of which Americans had become most

efficient. The high population densities of these countries made labor cheap and discouraged the use of labor-saving equipment. Labor productivity remained low and kept wages at a low level. They could not afford the less essential consumers' goods which the more progressive primary-producer economies had already begun to buy in the United States. What demand there was for imported manufactures was mainly confined to cheap staple products like cotton piece goods and hardware items which industrial Europe, with its relatively plentiful labor supply, was well qualified to supply.

The above survey of the major directions of American foreign trade shows how it became an integral component of a world-wide system of multilateral trade. In such a system a country's export and import markets need not be identical. Institutions have grown up which enable each country to sell its exports in one market, yet to use the proceeds for buying its imports in altogether different markets. The United States before the war traded in this fashion: its imports were obtained from countries largely different from those which offered the main markets for American exports. It enjoyed export surpluses with the non-European countries in the temperate zones, which in turn exported more to Europe than they bought from it. American imports from the tropics, on the contrary, heavily exceeded exports, since Europe had remained the major supplier of manufactured goods to the tropical regions. The proceeds of American net imports from the tropics helped to finance purchases in Europe by tropical countries. These in turn contributed towards financing net European imports from the United States.

PROGRESSIVE INDUSTRIALIZATION AND FOREIGN TRADE

As long as the world economy conformed to a fairly simple pattern of exchanges between complementary economies—industrialized nations on the one hand and primary producers on the other—it seemed capable of developing smoothly. At the same time industrial growth, both in northwest Europe and in North America, might have been expected to continue. However, this simple pattern came to be overlaid by new factors which made continued expansion of world trade problematical. As it turned out, the United States was not the only country to become emancipated from dependence on Europe's "industrial workshop." Late in the nineteenth century industrial methods and techniques began to spread to all quarters of the globe. There came about a gradual industrialization of those countries which had lagged behind in the early laps of the industrial race or had not yet

ered it when the modern world economy came into being. The diffusion ndustrialism has steadily gained, but is still far from complete.

The spread of industrialization. In the British Dominions, India, China, in America, and elsewhere, the primary industries—mining and agricul-e—were largely developed in the first place for export purposes. But of rse this primary production could equally well be used at home as the s for developing secondary (i.e., manufacturing) industries. Raw ma-als previously exported in their crude state were now taken through early stages of processing in the countries of origin; where ores once been exported, concentrates or metal ingots now were shipped abroad, or cotton fabrics were exported instead of raw fiber, and so on.

Again, the transportation networks of these countries, also planned inally to serve the export trade, had opened up internal markets and n access to raw-material resources that could provide the basis for de-pment of local industries. In Europe itself, heavy industries and manu-ure generally had spread from the northwestern seaboard to other parts he continent. In the Far East, Japan rose from feudal conditions to the us of a major industrial power within little more than a generation.

Competitive industrialization. This world-wide diffusion of industrial hods and techniques seemed to foreshadow nothing less than a rapid ose of that dovetailed pattern of complementary specialization which only just come into being. As one country after another graduated ndustrial maturity, one might have expected that opportunities for itable interchange between them would have become increasingly re-ted. Pessimists might predict that in a world where every nation pro-ed its own manufactures, international trade must shrink to include only ow flows of raw materials and foodstuffs, obtained under increasing culties and ever more acute competition by the nations which could not vithout them.

At least up to World War I, the realities of the world economy fully ted such gloomy anticipations. Industrialization, as it spread almost to ends of the earth, proved a powerful stimulus to, rather than a brake , world trade. In hitherto backward communities it generated demands mported goods—demands which had not been felt before. New indus-needed capital equipment which the young countries did not as yet luce. The improvement of transportation, a vital prerequisite for indus-development, called for massive imports of equipment. As new sec-ry industries were launched in these distant countries, and the base heir industrial development broadened, the new demand for capital pment underwent continuous expansion as well as diversifiation.

Other effects of industrialization on trade. Less direct, but fully as important in creating new markets for the manufactures of mature industrial countries, was the effect of industrialization on the living standards of backward countries. Growing segments of the populations of Asia, Latin America, and even Africa, came to make their living by more productive work than had been possible before, and greater labor productivity brought higher real incomes and higher consumption standards. Imported consumers' goods came within the reach of peoples who until then had been unable to afford them. In many places, and in colonial regions especially, there were forces at work which prevented native labor from claiming its full share of the benefits of greater productivity and reserved much of these benefits for foreign capital employed in the new industries. Even so, however, new purchasing power was diffused among the native populations and was translated into additional imports.

In backward countries where conditions were favorable to continued industrial expansion once the process had started, domestic industry tended sooner or later to catch up with the new categories of demand for imported products created by industrialization. Manufacturing industries catering to local needs were steadily diversified; basic heavy industries and domestic production of capital equipment were started. In short, the new demands resulting from industrialization did not create steady and assured new markets for the products of mature industrial countries. It is more accurate to say that the new developments opened up new, if continually shifting, opportunities for export from older countries, just as they destroyed other such opportunities.

Adjustment to the new industrialization. The new industrialization in far corners of the globe promoted an expansion of the foreign trade of the established manufacturing countries, but it also forced them continually to adjust their export industries to fit a demand that was fluid as to commodity composition and geographical direction. No industrial country accustomed to exporting manufactured goods could afford to rest on its laurels and expect that the things it had successfully exported at one time would necessarily continue in demand as the years went by.

British industry provided the outstanding example of failure to display the flexibility required for successful competition in a changing world economy. Typical British export industries like textiles and hardware had grown accustomed to serving the needs of economies still on the bottom rungs of the industrial ladder. They supplied products which were commonly among the first to be produced by the new domestic secondary industries of developing countries, and also among the first to be offered for export by

ountries graduating to the status of exporters of manufactures. The promi-ence of such goods in the British export structure had made it obsolescent ven before World War I in relation to the needs of a world that was rap-ly becoming industrialized. In fact World War I provided a strong stimu-s to further industrialization of backward countries. By the 1920's the fail-re of Britain's staple export industries to adapt themselves to changes abroad id become a rather obvious cause of British unemployment.

ADE AMONG INDUSTRIAL NATIONS

As the world economy developed, it exhibited another feature which futed the pessimistic argument that mature industrial countries were dig-ng the grave of their own foreign trade by supplying capital equipment backward nations. This feature was the establishment of intensive trade lations between those very countries which already possessed complex d diversified manufactures, nations, that is, whose economies for purposes foreign trade appeared to be at first sight competitive rather than com-ementary. England, Germany, France, the Low Countries, and other in-strial nations found that, however mutually obnoxious they might be hen competing elsewhere, they also had plentiful opportunities for profit-le trade with each other. Their experience demonstrated that the possi-ities of dividing labor internationally are not confined to the traditional change of raw materials for manufactures.

The infinitely varied demand of highly integrated industries for spe-lized production equipment, many different grades of seemingly iden-al commodities like steel or textile yarns, the wide range of chem-l products, and other industrial materials, offered numerous open-gs for the producers of one country to enter the markets of another. Simi-possibilities existed in the field of consumers' goods. Diversified con-nption habits and varied tastes and preferences, which industrialized mmunities with their high living standards could indulge, created many portunities for the exchange of specialized consumers' goods of the less ential types, as illustrated by processed foodstuffs, wines, and liquors.

By and large, the experience of highly industrialized countries, when y tried to trade with each other, showed that each was a good customer the other. This appeared to be true at least so long as opportunities for fitable mutual trade were not blocked by tariffs and other restrictions liberately designed to choke them off, as became increasingly the case r World War I. The situation we have outlined—prior to the advent of

increasingly restrictive commercial policies—has been summarized as follows: "The growth of manufacturing, far from rendering the countries concerned independent of foreign-produced manufactured articles, stimulated the importation of such articles, and . . . imports tended to follow a course parallel to that of manufacturing activity." [1]

INTERNATIONAL INVESTMENT AND FOREIGN TRADE

In tracing the emergence of the modern world economy we have stressed, to this point, the differences between various regions in natural resources, production structures, and consumption patterns as the major determinants of the directions of world commerce. Our survey is incomplete until we have accounted for the part played by international investment in shaping the pattern of world production as well as the network of world trade. Distinctions often made between investment as a "financial" and trade as a "commercial" phenomenon should not be allowed to obscure the essential unity between international trade and investment. Just as investment funds are spent domestically for goods and services, transfer of "capital" across national boundaries has to be effected through movements of goods and services.

There are many technically distinct forms of international investment. Their common feature, however, is that investors (or lenders) make amounts of the currency of the "capital-exporting" country available to nationals of a "capital-importing" country. Foreign money is of no use to the latter (let us think of them as the borrowers) unless they spend it directly on goods and services (for instance, machines and productive equipment) which they import from the lending country. Or the borrowers might convert the proceeds of their loan into their own domestic currency by selling the currency of the lending nation to other citizens of the borrowing nation who wish to pay for goods and services obtained from the lending country. For the lending country is the only market where the "exported" money is accepted in payment for goods and services. For that very reason, it is to this country that the "exported" funds must ultimately return to be spent.

Therefore, capital invested abroad must always be "transferred in kind," through exports of goods or services from the country which makes foreign loans, which finances mines, plantations, or factories in foreign lands, or otherwise engages in the "export of capital."

[1] *Industrialization and Foreign Trade*, League of Nations, 1945, p. 118.

Similarly, the return obligations which arise from such transactions can only be effectively discharged through "transfer in kind," i.e., by merchandise or service exports on the part of the capital-importing country. Such exports provide the means for making interest and amortization payments on foreign loans, or remitting the profits of foreign-financed enterprise. Loans contracted in a foreign currency have to be serviced and repaid in that currency, and foreign stockholders will claim their dividends in their own currency, too. Thus, the debtor country has to earn a margin of foreign currencies in order to satisfy its foreign creditors, and it can only do so by selling more of its goods and services abroad than it would have to export, if its sole concern was to raise enough foreign exchange to pay for its current imports.

DIRECT AND INDIRECT TRANSFERS OF CAPITAL

The transfer "in kind" of capital can of course take place directly between the creditor and debtor country. An example of such a direct transfer would be a dollar loan made by United States investors for the construction of a steel plant by a Brazilian corporation which spends the proceeds of the loan entirely on construction materials and equipment imported from the United States and on the services of American technicians employed in the project. Alternatively, however, the Brazilian company might decide to convert part of the dollars into cruzeiros to pay native workers and purchase materials available in Brazil. The "transfer in kind" would still involve only two countries if the dollars were purchased by other Brazilians who want to pay for imports from the United States.

But we can well envisage situations where the dollars which were lent to foreigners find their way home by roundabout routes. If the borrowing company buys some steel-making equipment in England, it must buy sterling from Englishmen (or from other foreigners possessing sterling) who want dollars to discharge obligations payable in the United States. In short, the loan dollars may pass through many hands and cross many national boundaries before they return home, but ultimately they will come back to the only country where goods and services can be bought for dollars. Once every dollar lent to foreigners completes its journey home by being spent by foreigners in the United States, it will have a necessary counterpart in goods supplied or services rendered by Americans to foreigners.

Transfer in kind of interest or profits, and repayment of loans, may also be effected directly or by roundabout routes. In our Brazilian example,

the borrowing corporation could satisfy its American creditors by paying in dollars gained from additional Brazilian exports to the United States. But dollars obtained through conversion of foreign currencies earned by Brazilian export surpluses to third countries would serve equally well.

EFFECTS OF CAPITAL TRANSFERS ON TRADE BALANCES

We have seen that effective transfer of capital and effective discharge of debtor obligations must generate merchandise and service transactions in the opposite direction. Hence national foreign trade accounts must evidently reflect a country's status in international investment (its status as debtor or creditor) as well as its production and requirements patterns, on which we dwelt above. A country which is an active exporter of capital will export a larger pecuniary volume of merchandise and services than it imports. As it goes on exporting capital, however, its investors will accumulate claims on debtors in foreign countries. Such claims can only be realized if the creditor nation, by additional imports, enables foreigners to secure additional supplies of its currency. This will offset part of the export surplus generated by additional foreign investment. If the creditor nation's foreign investments remain at a constant rate year by year, and if outstanding debts are not reinvested abroad as they fall due for repayment, imports representing debt service and repayment will come to exceed exports representing new investment, and the capital-exporting and creditor country will come to import a larger pecuniary volume of goods and services than it exports. Great Britain was in this situation during the second half of the nineteenth century.

A capital-exporting country can continue to maintain an export surplus only if the rate of new foreign investment is progressively stepped up (which can be done by reinvesting abroad income and principal payments due on outstanding investments). In the same way, a creditor country which has ceased to be an active exporter of capital can only collect income and payments of principal on foreign debt if the value of its imports exceeds that of its exports.

Conversely, the trade accounts of a country actively importing capital will show an import surplus as long as the cost of service and repayment of old obligations does not exceed the value of new foreign capital received in a given period. Once this has occurred, or if imports of foreign capital have been discontinued, the debtor nation can only pay interest and repay principal if it exports more than it imports.

It follows from the above that, if international investment is to func-
on smoothly, the network of world trade must do more than merely re-
ct a regionally differentiated pattern of production and requirements.
ows of merchandise and services must be capable of serving a dual func-
n. While matching availabilities of goods and services in one country
th requirements in others, they must also accommodate the movement
capital from capital-exporting to capital-importing nations and the trans-
of payments due from debtors to creditors.

We saw above that various regions of the world learned to trade with
h other, even though their import and export markets did not coincide.
given region, that is to say, would use the proceeds of net export sales
a second region as a means of paying for net imports from a third region.
other words, the settlement of debit balances was achieved through
ndabout transfer of credit balances. Such roundabout transfers can
inly be used, not only to liquidate adverse balances incurred in trading,
t also to furnish favorable balances required for the effective transfer,
vicing, or repayment of foreign investment. As a next step we have to
mine the forces which made it possible for the network of world trade
perform the double function of bringing together not only buyers and
ers, but also debtors and creditors, in mutually profitable relationships.

NCTIONS OF INTERNATIONAL INVESTMENT

Today we tend to think of foreign lending mainly in terms of intergov-
mental transactions, designed to repair the economic dislocation wrought
political catastrophes (such as world wars) and often explicitly subordi-
ng economic objectives to those of political foreign policy. Yet such
rgovernmental loan transactions, except in wartime, were almost un-
wn before 1914. Governments often appeared as borrowers in foreign
ital markets, but their bonds were bought by private investors. A major
tion of international investment, however, took place between a private
rprise in one country which needed capital and private investors in
her who were ready to supply it.

Such private international investment served the clearly discernible eco-
ic function of transferring capital from countries where it was rela-
ly plentiful to those where it was scarce in relation to other productive
ors, and where investment funds converted into capital assets promised
gher rate of return to the investor than he could obtain in his own
ntry. Even in those days international investment had its political reper-

cussions and implications in plenty, but these were mostly by-products of transactions which individuals had originated in response to the private-profit motive.

In the expansive phase of the world economy which ended with World War I, the pattern of international debtor-creditor relationships coincided largely with the basic differentiation of world production into industrial and primary-producer regions. Facilities for making the machinery and other equipment which the undeveloped countries needed, and the funds to buy them, both were plentiful in Europe. Britain—and to a lesser extent France and Germany—naturally became exporters of capital.

By virtue of the very fact that they were industrialized, such countries possessed ample capital equipment. This made for efficient production, high average incomes, a large accumulation of savings; consequently, they had available on a large and increasing scale funds for investment. However, their advanced stage of economic development also implied that domestic investment needs were becoming increasingly well supplied. A declining rate of return on capital characterizes economies already well provided with productive facilities. Investors could escape this saturation of the domestic capital market by seizing opportunities for more profitable investment in countries where the utilization of plentiful natural resources and ample reservoirs of manpower awaited the application of capital.

Dearth of capital in relation to other factors would not alone have induced foreign investment in backward countries. There also had to be prospects of profits in a form which could be readily transferred to the investing economies. Such prospects were most favorable where the new capital could be put to work in developing facilities for the production and transportation of commodities which were in active and growing demand in the world's markets. Obviously first choice lay with primary commodities for which the industrialized, capital-exporting economies themselves offered an assured market.

Thus, international investment became a powerful two-way stimulant of world trade. On the one hand it helped to move manufactured goods (partly but not exclusively in the form of capital equipment) from the industrial countries to those producing primary commodities. On the other hand it induced a return flow of raw materials, part of which was used to transfer the income from investment in young countries to owners or creditors in the old. Northwestern Europe became, in other words, the "world's banker" as well as the "world's workshop." In these old, highly industrialized countries, portions of national savings were set aside, year by year, to be invested abroad. The investment was made possible through ex-

gland, by virtue of her lead in industrialization, naturally was first ge as a "banker country." Not only did the British start to build up ale overseas investments long before other nations; until World hey continued to add to them at a rate unparalleled by any other . By 1914 the value of British overseas assets approximated twenty lollars, a sum roughly equal to the foreign assets of all other creditor s combined.

e way in which Britain's mounting income from foreign investment s way home illustrates well the dual function of world trade which d above. During the second half of the nineteenth century, British ıdise trade showed a persistent and steadily rising surplus of im- er exports. By the opening of the present century British merchan- orts (excluding re-exports of imported commodities) were paying than two-thirds of retained imports. Much of this import surplus et by exports of services—shipping, insurance, foreign banking, and lling of commodities on foreign account in British markets. A por- he imports, however, represented investment income. The depend- the British on imported food and raw materials, together with their to free trade long after most other nations had resorted to pro- qualified Britain peculiarly well to play the part of a large-scale in- ıal creditor.

at was said above concerning roundabout transfers of investment o creditor countries applied particularly to the returns on British nvestments. Their direct transfer from the debtor countries would e been feasible if Britain's requirements had coincided in nature ıtity with what these countries could supply. Moreover direct trans- d have been possible only if Britain's trade account had shown heavy urpluses with just those particular countries where its investments gest.

act precisely the opposite was true. British import surpluses were in trade with the United States and with continental Europe, re- ıich in the 1920's contained only some 13 per cent of Britain's total investments. By contrast, Britain's largest export surpluses went to ırma, Ceylon, and other tropical countries, where nearly one-third

of its investments were located; merchandise trade with the Dominions, where nearly half the total investments were located, was roughly balanced. Lack of geographical correspondence between the sources of investment income and the sources of imports was no inconvenience; and it was no inconvenience precisely because of the character of intercontinental trade which we examined above.

The United States was a heavy net importer from the tropical zones, and we may say that the American export surplus to Britain represented roundabout transfer, via the United States, of investment income on British assets located in the tropics. Similarly, continental Europe purchased more, both from the tropics and the Dominions, than it sold to them. In this manner the British import surplus in trade with European countries also represented investment income—from the tropics and Dominions. This roundabout transfer of British investment income benefited countries located along the "transfer routes": by net exports to the open British market they could earn foreign exchange and use it to finance their purchases of food and raw materials in primary-producer regions overseas.

THE UNITED STATES IN FOREIGN INVESTMENT

In Chapter 28 we shall examine in detail the experience of the United States with respect to international investment. Here let us merely note that it was no exception to the rule that a nation, on becoming highly industrialized, will seek foreign outlets for a portion of its savings. However, the entry of this country into the circle of capital exporters was delayed for two reasons. First, during the nineteenth century the United States had imported much foreign capital which had to be serviced and repaid; second, our continent-wide economy continued to offer vast opportunities for domestic investment even after this country had become the world's largest industrial producer. Although the volume of American industrial output had overtaken England's around 1880, it was not until this century that American foreign investment, initially in the Caribbean region and Canada, became important. However, the heavy accumulation of indebtedness to European (and especially British) investors left the United States a debtor on international capital account for some time after it had itself become an active exporter of capital. Yet shortly World War I transformed this country into a creditor nation on a formidable scale.

The United States in the world economy: between wars

LESSONS OF THE RECENT PAST

From America's experience with foreign trade and investment between the two World Wars we can learn much that is relevant to the problems posed by our participation in the world economy today. World War II has finally confirmed this country in a position of economic pre-eminence not even approached by any other nation. Chapter 29 is largely devoted to studying the implications of this fact. But even before 1939 the United States had assumed a formidable stature in the world economy. The record of its international transactions between 1918 and 1939 brings out four main facts which may be briefly stated before we explore them in detail.

Relative self-sufficiency of the American economy. Throughout the interwar period the United States accounted for a much greater share of world production and consumption than of world trade. It was far from being fully self-sufficient, and its trade and investment transactions—measured in absolute terms—were large enough to make it a leading trading nation. Yet, relatively speaking, external transactions were less important to the American economy as a whole than they were to most of the countries with which the United States did business. We commonly export about 10 per cent of what we produce; imports play a correspondingly minor role in our consumption. Our economy has been less closely dovetailed into the international division of labor than those of other nations.

Instability of international transactions. The volume of American foreign trade and investment fluctuated widely during the interwar period. Ups and down in foreign trade were closely geared to the severe cyclical fluctuations of business activity at home that were characteristic of the period. When a domestic boom collapsed, United States

ports and capital exports tended to decline even more sharply than domestic production and employment. Not only did such sudden and heavy contractions of dollar expenditures abroad help to make depressions worldwide by curtailing the incomes of foreign countries, but ultimately they also made domestic depression worse, by impairing the foreigners' ability to buy American goods and make payments on their debts to Americans. Thus, American export industries and investors suffered along with foreigners from the instability of our external transactions.

The export surplus. During the interwar period as a whole, United States foreign transactions tended persistently to claim more dollars from foreigners than the latter had acquired by selling their goods and services to buyers in this country. This tendency was particularly reflected in the export surplus which marked United States foreign trade in every year of the interwar period. We have seen in Chapter 27 that a creditor country normally collects its income from foreign investments by accepting an import surplus. The United States, which became a net creditor on international account as a result of World War I, did not make a parallel transition to become a net importer of goods. The 1920's saw persistent and large American export surpluses, narrowly balanced by concurrent exports of capital and dollar expenditures under other heads. However, capital exports virtually ceased with the onset of the Great Depression, which also heavily curtailed American imports. Throughout the 1930's, foreign countries were compelled to adjust their dollar expenditures to their reduced dollar receipts. They did this by placing import restrictions on American goods, defaulting on debts owed to Americans, and other unhealthy devices.

Lack of a foreign economic policy. United States public policy failed conspicuously between the wars to adapt itself to the country's changing position in the world economy. Specifically, persistence in a high-tariff policy is now generally adjudged to have been incompatible with the nation's status as a major international creditor. By blocking imports of foreign goods, our high tariffs made it all the more difficult for foreign countries to earn the dollars with which to pay for American exports and satisfy American creditors. Although after 1934 important steps were taken to lower the tariff wall, public policy became inconsistent in new ways which made little sense. Subsidized exports of "surplus" farm products and special loans to promote exports were just as hard to reconcile with America's creditor position as were high tariffs. Up to the outbreak of World War II, our external transactions were affected by these and other public *policies*, often mutually inconsistent. What we lacked was *a policy* that would have attempted to reconcile the various and often divergent interests of the sev-

UNITED STATES IN WORLD PRODUCTION

The setback which World War II has inflicted on the economies of ɔe and Asia may tend to overemphasize at the present time the gi- : economic stature of the United States among the nations of the l. However, even prewar figures for relatively "normal" years convey ure that is impressive enough. For instance, in 1929, at the peak of ar prosperity, the United States' national income was as high as the ined incomes of Great Britain, Germany, France, Japan, Canada *and* en other foreign nations.[1]

The United States' lead in world manufacturing. America's unrivaled ɔn both as producer and consumer of manufactured goods is force- ɔrought out by Table 27.

le 27 POPULATION AND PRODUCTION OF FINISHED MANUFACTURES IN VARIOUS COUNTRIES, 1926-1929

Country or group	Population	Annual production	Annual supply per capita *
United States	120 million	$31.5 billion	$254
United Kingdom	46	7.0	112
Germany	65	8.6	111
France	41	4.9	96
U.S.S.R.	149	3.2	22
Japan	62	1.9	28
Four British Dominions	25	3.0	164
China and India	790	1.3	3
World	**1,960**	**75.0**	**38**

* Supply equals production plus imports minus exports.

ıe table shows that American output of finished factory products in ɜ twenties accounted for roughly two-fifths of the world total. Al- *net* American exports of such products amounted to a billion dol- e average American received more than twice the value of manu-

[1] *ıe United States in the World Economy*, United States Department of Com- 943, p. 29.

factured goods available to inhabitants of the leading industrial countries of Europe.

If countries not separately listed in Table 27 were included, we would see that a per capita supply of $254 worth of goods for 120,000,000 Americans contrasted in those years with an average of $109 per capita for 509,000,000 people living in twenty-one foreign countries with developed economies, while the remaining 1,331,000,000 people—or two-thirds of the world's population—had to be content with a bare $7 per capita. We may observe parenthetically that these figures bear eloquent testimony to a grossly uneven distribution of the material benefits of industrialization among the peoples of the world.

Table 28 indicates the stages by which the United States, over the past eighty years or so, gained world leadership in manufacturing. Until the

Table 28 PERCENTAGE DISTRIBUTION OF WORLD MANUFACTURING PRODUCTION

			WESTERN EUROPE: 6 MAJOR COUNTRIES						
Period	United States	Russia	All 6 countries	United Kingdom	Germany	France	Japan	Canada	Rest of world*
1870	23.3	3.7	61.0	(31.8)	(13.2)	(10.3)	—	1.0	11.0
1913	35.8	5.5	41.9	(14.0)	(15.7)	(6.4)	1.2	2.3	13.3
1926/29	42.2	4.3	33.8	(9.4)	(11.6)	(6.6)	2.5	2.4	14.8
1936/38	32.2	18.5	29.7	(9.2)	(10.7)	(4.5)	3.5	2.0	14.1

Figures in parenthesis are included in total for six major countries.

* European countries not separately listed account for a major part of production in this column, e.g., 10.3 per cent out of 14.8 per cent in 1926-29.

late 1920's American industrial expansion was steadily displacing Western Europe from its nineteenth-century position as the workshop of the world. In more recent prewar years, however, the rapid growth of Russian industries has significantly affected the world pattern of manufacturing production, as may be seen from the last line of the table.

The United States as a raw-materials producer. It is enough to note briefly that American leadership in industrial production was matched by equally impressive contributions to world production of many raw materials and basic intermediate products. For example, in 1937, the share of this country in world production was 49 per cent in the case of cotton, 35 per cent of coal, 38 per cent of steel, 61 per cent of crude oil. In fact, this country's ability to feed its formidable industrial machine with an abundant flow of widely assorted raw materials produced at home goes far to account for its relative self-sufficiency.

THE SHARE OF THE UNITED STATES IN WORLD TRADE

The gross share. Evidently the United States was the world's largest producer of goods even before World War II increased its lead over other nations. But did it possess a corresponding share in world foreign trade? In the interwar period, it is true, the United States was the world's biggest exporting nation, and no other country imported more raw materials. However, the total value of American imports was consistently below Britain's, a much smaller and less populous country. Again, in most interwar years the sum of British imports and exports was larger. Between them, the two countries shared fairly evenly about a quarter of all world trade, as illustrated by the following figures for 1929, when the trade of both countries was running high:

	Percentage of	
	World Imports	World Exports
United States	12.2	15.9
United Kingdom	15.2	10.8

Thus Britain, with a population only one-third as large as that of the United States, could run a close race for first place in world trade. This fact illustrates the United States' peculiar position in international trade. It is the size of its domestic economy, and of the export and import flow which this colossus dispatches and receives, that makes America a leading trading nation, *not* the intensity of its participation in the world economy.

Per capita values of foreign trade. It is a noteworthy fact that the United States is much less intensively concerned with international trade than are other industrial countries. Graphic evidence of this condition is provided by a comparison of foreign trade values per capita. Such comparison gives a relative measure of how closely an economy is fitted into the international division of labor. For instance, in 1938 the United States exported $24 per capita, the United Kingdom $55 and Canada $75. Per capita imports in the same year were $15 for the United States, $95 for the United Kingdom and $60 for Canada. Neither Britain nor Canada are extreme cases in this respect. For example, New Zealand, with its economy largely geared to export production, sent abroad $140 worth of goods per capita in 1938.

However, the United States is not the most nearly self-sufficient country. Russia, with industrial production in 1938 second only to that of the United States, exported as little as $2 worth of goods per capita and im-

ported no more than this. Soviet economic policy sought "autarky," or tual economic independence of the outside world. This policy, indeed one of the reasons that living standards in Russia remain vastly inferio those in the United States or in Western Europe. Clearly, however, fore trade has definitely played a smaller part in American economic life t it has in the case either of European nations which industrialized in nineteenth century or of advanced younger economies, like those of Car or New Zealand.

Foreign trade and the national income. This impression is confir if we compare the foreign-trade values of the principal trading nations v their national incomes. In Table 29 we find the United States at the bot of the list.

Table 29 IMPORTS AND EXPORTS AS PER CENT OF NATIONAL INCOME, 1929

	Per cent of National income	
	imports	*exports*
Netherlands	48	34
Norway	48	34
United Kingdom	25	17
France	24	20
Australia	22	21
Canada	21	20
Germany	18	18
United States	5	6

This comparison overstates somewhat the economic independenc the United States, since personal services and other components, whic their very nature do not move in foreign trade, account for a higher of national income in the United States than they do in other coun However, even if we limit ourselves to movable goods, we find that some 10 per cent of American output of such goods was exported, imports accounted for roughly 7 per cent of American consumption.

America's large share of world trade and the relatively small sha our total economic activities devoted to world trade—these two charac tics of the American economy add up to a conclusion of vast import The conclusion is that the impact on foreign markets of American trade to be greater than the effect upon the American economy, taken as a v of influences transmitted from abroad through foreign trade channels. conclusion, as we shall see, is especially significant in the light of the ency of American foreign trade toward unstable behavior.

FOREIGN TRADE AND THE DOMESTIC ECONOMY

To assert that the health of the American economy to a great extent depends on trade with the outside world, just after we have stressed its relative independence and self-sufficiency, may seem paradoxical. This apparent inconsistency resolves itself easily enough. So far, we have compared aggregate quantities only, without taking into account important facts concealed within these totals. Foreign trade—and this goes for both exports and imports—is essential indeed to the successful functioning of our economy in peace and war. Our observation, that "only" 10 per cent of the nation's output is exported, takes on a rather different meaning as soon as we add that in 1937 as many as 2,400,000 Americans made their living by producing industrial and agricultural goods for export, not counting transport workers and others whose jobs depended indirectly on the export trade. Several major industries are adjusted to disposing of substantial portions of their output in foreign markets. About one-third of American cotton and tobacco crops were exported before the war, and so was half the output of refined copper. Export percentages in several major manufacturing industries—such as farm machinery, automobiles, and office appliances—ranged from 15 to 20 per cent.

Conversely, much domestic production would be impossible without imports of many raw materials that cannot profitably be produced on a sufficient scale in the United States or are not available at all. Tin, rubber,

Table 30 SOME IMPORT COMMODITIES

Prewar share of imports in U.S. consumption	*Industrial materials*	*Metals and ores*	*Foodstuffs and beverages*
100%	crude rubber raw silk carpet wool jute and burlap diamonds manila fiber	tin nickel cobalt	coffee cocoa tea bananas spices
75-99	newsprint tung oil asbestos	manganese chromite	
50-74	furs flax seed	tungsten bauxite	raw sugar

coffee, bananas and other essential material ingredients of the American way of life have to be obtained from abroad. Even though "only" 7 per cent of our national consumption may be imported on the average, there are numerous commodities for which we depend largely, or wholly, upon foreign supplies. Some of these are listed in Table 30.

THE STRUCTURE OF UNITED STATES IMPORTS

Predominance of raw materials. It will be noted that the commodities enumerated above, with few exceptions, come under the headings of raw materials or unprocessed foodstuffs. Commodities requiring further fabrication by American industry before they reach the ultimate user or consumer —including crude foodstuffs—account for more than 70 per cent of the value of all imports.

World War II, if anything, has further reduced the share of finished manufactures in the import total. The factors which have shaped our import structure stand out clearly enough. The market for foreign industrial products in the United States has been progressively restricted by the growth of highly diversified manufacturing industries which—often sheltered behind the tariff wall—are able to supply virtually the full range of industrial goods required by Americans. Since American farming takes care of the demand for staple foodstuffs, import demand is naturally focused mainly upon those materials which the American climate, soil, and subsoil do not yield at all, or else produce in insufficient quantity or at a cost which makes it profitable to turn to foreign sources.

Imports and domestic business activity. The high proportion of industrial raw materials, often of a luxury nature, in our imports has a great deal to do with the reputation for instability acquired by American foreign trade during the interwar period. We expect the import volume of any country to fluctuate with its domestic economic activity. But the amplitude of fluctuations in imports will depend greatly on the uses to which the imported goods are put. For example, the volume of British imports tends to be relatively stable because they consist so largely of foodstuffs and raw materials, like cotton and wool, going into nondurable consumers' essentials. People will continue to buy approximately constant quantities of staple foodstuffs and essential clothing even if reduced incomes compel them to curtail other expenditures. Increased incomes, on the other hand, will not induce them to buy significantly greater quantities of "essentials." By contrast, a major share of American import demand is derived not from relatively fixed consumers' requirements (e.g., for food), but from the rate of

production in industries highly susceptible to fluctuations in general business activity. Rubber, the biggest single item on America's interwar import bill, provides an outstanding example.

Hence, commodities which account for a major share of all American imports tend to be purchased in the quantities required by a given level of industrial production at home. Low prices in world markets will not by themselves induce an expansion of American imports, nor will their volume be significantly restricted by high prices.

Effects on foreign markets. American purchases of many raw materials, however, bulk so large in world markets that their volume helps to determine world market prices. If, therefore, American imports of raw materials shrink in consequence of business recession in the United States, their contraction will tend to depress world prices. For this reason the value of American imports will tend to contract more sharply than their volume. Once this has happened, low import prices alone will not stimulate a revival of raw-material imports, and their volume will not expand again until industrial recovery has started in the United States. American demand for imported foodstuffs is also sensitive to variations in the level of domestic business activity, though to a much lesser extent than in the case of industrial raw materials. American farmers supply most of the staples of our diet, and imported foodstuffs fall largely in the less essential categories. When consumers' incomes are running high, greater quantities of bananas, coffee, cocoa, and similar items are imported than when depressed incomes enforce curtailment of expenditures on nonessentials.

To sum up, Americans purchase abroad mainly primary products. What we purchase does not vary greatly when prices change; our demand for imports tends to be, in technical language, *inelastic*. But the amount we import does affect world prices because of the large size of our purchases. In the past these factors have combined to cause fluctuations of business activity, originating in the United States, to spread to the rest of the world. The dislocating influence of variations in American purchases has been particularly felt and resented in what may be called, somewhat loosely, "single-crop economies," or countries heavily specialized to the export of relatively few primary commodities. Many of our principal imports originate in such economies—rubber, tin, crude oil, raw sugar and tropical fruit, to mention only a few. To make matters worse for the primary-producer countries, these commodities are often supplied by numerous small producers competing with each other, who typically respond to a price decline by *expanding* their output in order to sell more at the lower price, and thus to maintain their total receipts. However, if foreign demand for

their output does not increase in response to the stimulus of low prices (and American demand, typically, does not), additional production depresses prices further and adds to the "glut on the market." In this fashion, business fluctuations in the United States have contributed materially to the emergence of so-called surplus problems in world commodity markets; especially did this occur in the Great Depression of the thirties.

Vulnerability to foreign monopolies. On the other hand, America's position as a big import market for raw materials has also invited attempts by foreign producers to form national or international monopolistic combinations, with or without governmental backing, in an effort to compel United States importers to pay higher prices. At different times in the past almost every major commodity on the American import list has been the object of such attempts. Fortunately for the American consumer, these schemes usually have been unsuccessful, mainly because production of most materials is not sufficiently concentrated to lend itself easily to comprehensive monopolistic control. The organizers of most such schemes, even if initially they succeeded in raising prices, found later that other producers, not bound by the agreement to restrict production or exports, were encouraged by the higher price to increase their output and thus forced prices down again. Most notorious, perhaps, was the "Stevenson Plan," under which British colonial rubber producers, with government support, accomplished a spectacular if short-lived increase in rubber prices during the middle 1920's. Planters in the Dutch East Indies, not bound by the agreement, expanded their sales so rapidly that the British were soon forced to abandon the plan.

In the 1930's the hardship inflicted on primary-producer economies by the collapse and stagnation of raw-material prices promoted a strong movement toward regulation. Production and export sales were restricted by agreements involving comprehensive co-operation between the governments of producer countries. Attempts have been made to justify these schemes as defensive measures necessary to economies heavily dependent on primary production and exposed to unstable world market conditions. In practice the temptation always is to raise prices to a level at which consumers seek substitutes and alternative sources. It may be doubted whether such regulation has ever permanently benefited producers.

Mutual interest in stable raw-material markets. Clearly foreign exporters of raw materials have a direct interest in the maintenance of a high level of business activity in the United States. However, they are not the sole beneficiaries of a steady and broad outflow of dollars in payment for materials imported by this country. Such a flow not only helps to keep their

economies prosperous, but also increases their power to purchase American goods and their ability to pay American investors and creditors.

CHANGES IN COMPOSITION AND DESTINATION OF EXPORTS

In contrast to American imports, which have remained remarkably stable in commodity composition and geographical origin, United States exports have undergone important changes in recent decades.

Decline of agricultural exports. The outstanding trend in American exports—apparent even before World War I—has been the progressive displacement of farm products by manufactured goods. In 1922-24, farm products still accounted for 47 per cent of all exports, but by 1937-39 their share had fallen to 25 per cent. This decline reflected, in part, the steady deterioration of the competitive position of American farming relative to the industrial sector of our economy. (The problems which this trend posed for American farmers were discussed in Chapter 16.) The constant expansion of manufacturing exerted an upward pressure on wages and other production costs in American agriculture, and tended in consequence to force the American farmer's costs above those of farmers in foreign countries.

During the interwar period, therefore, an increasing share of the world market in staple farm products, such as wheat, meat, lard and cotton, passed to Canada, Australia, Argentina, Brazil and other countries. United States tariff policy, by raising the price of industrial products to the farmer and by making it harder for the foreigner to acquire dollars, has added to difficulties facing American farmers in competing with low-cost producers abroad. At least equally important, however, was the wave of agricultural protectionism which swept the food-importing countries of Europe after World War I. These countries restricted food imports under political pressure from their own agricultural interests or as a reaction to their experiences with blockades and shipping shortages during the war. Technological changes, notably the substitution of rayon for cotton, helped to contract foreign demand for our farm products.

Subsidized farm exports. The various measures by which the New Deal sought to counter agricultural distress (described in Chapter 16) added to the difficulties of marketing American farm products abroad. We have seen that the production costs of American farming, gradually rising in relation to those of foreign producers, had impaired its ability to compete in world markets. One of the main objectives of the farm programs of the 1930's was to raise the domestic prices of farm products. Farm "price support"

meant the establishment of an artificial price level; consequently, the domestic market could not absorb all of American farm production. The total productive capacity of American agriculture was still adjusted to selling large portions of many crops abroad.

Now, with "price floors" guaranteed to the farmer (and with crop restriction schemes largely ineffective), American farming inevitably began to produce so-called surpluses—that is, portions of its output which the domestic market would not buy at the artificial prices, and which United States government agencies had to acquire in order to make price support effective. Naturally, farmers found it more profitable to sell at high prices to the government than to sell for export at low world market prices. Not only was the carrying of these surpluses expensive to the government, but also their presence was a constant source of anxiety to farmers and their political representatives, who came to regard them as a threat to the system of guaranteed prices. The temptation was great to "dump" them abroad—that is, to export "surplus commodities" at prices below what the American consumer had to pay for the same products, the government or taxpayer making up the losses of the exporters. Precisely this course was, in fact, adopted. Various export subsidy schemes went into effect, notably for cotton and wheat. The scale of subsidized farm exports would have been even greater but for the several drought years of the 1930's, which reduced the size of the so-called surpluses. This resort to export subsidies did not sit well with the vigorous campaign against foreigners' dumping practices, a campaign traditional with Americans since the early days of the republic. Worse still, it reflected an alarming tendency to keep in being an overexpanded agricultural productive capacity, and to shift part of the attendant cost from the American nonfarm consumer and taxpayer onto the foreigner.

FARM POLICIES AND FOREIGN TRADE

Agricultural protectionism. New Deal farm policies also recognized the desire of American farmers for protection from foreign competition. Import duties on foreign farm products had long been written into American tariff acts, but most of them were in the nature of political sops to the farmer, intended to sweeten the pill of his having to pay more for the protected products of manufacturing industry. With few exceptions import duties were of no economic significance or benefit to the farmer. The picture changed, however, when the New Deal raised the level of domestic farm prices above that of the world market.

The cost of carrying domestic "surpluses" was high enough without 'overnment's having to buy foreign products in order to keep them off ıome market; obviously, offering them at prices below support level d have undermined the whole system of price support. At this point nport duties on farm products (which had been raised under the Tariff)f 1930) proved useful, as long as the rates of duty exceeded the differ- between the delivered cost of foreign farm products and the price ınteed to home producers. When they did not—as happened in several where the slump in world market prices after 1930 had been particu- severe—additional protective devices were improvised. Some of them— mport quotas limiting the quantity of a given product to be imported a period—again were hard to reconcile with traditional American com- ial policy, which condemned quantitative controls over imports. More- traditional policy had recently been reaffirmed in the Trade Agree- ; Act of 1934.

Advance of industrial exports. A wide variety of manufactured goods steadily displacing farm exports throughout the interwar years. Among capital equipment and durable consumers' goods came to occupy an ally prominent place; together they amounted in 1937 to nearly one- of all United States exports. The foreign demand for such goods, in ıst to that for foodstuffs, is highly susceptible to cyclical fluctuations. ıcreasing share of manufactured goods in United States exports means ;everal major domestic industries have joined that mutuality of interest maintenance of high levels of income abroad and at home which we ıoted earlier with respect to United States raw-material imports. In ıl, Americans and foreigners clearly have a mutual interest in the :nance of high and stable levels of income in their respective countries.

Geographical distribution of exports. The geographical reorientation ıerican export trade which occurred during the interwar period was r related to the decline of farm exports. Europe, the main market for ter, had absorbed more than three-fifths of all American exports just World War I. By 1937-39 its share had declined to 42 per cent, due r to the contraction of European purchases of American foodstuffs)tton. By contrast, the European share in United States exports of d manufactured goods was well maintained.

ALANCE OF INTERNATIONAL PAYMENTS

The export surplus. In every single year between the wars the United spent less for imported merchandise than it received from foreigners

in payment for American exports; every year it had an export surplus. The magnitude of the export surplus fluctuated widely. Just after World War I, in conditions very similar to those which prevail today, the value of exports was roughly double that of imports, while in some years during the Great Depression exports barely exceeded imports. During the entire period from 1919 to 1939 the United States sold $19,000,000,000 more merchandise abroad than it bought abroad. How was it possible for foreigners consistently to spend so many more dollars on American goods than they were earning by selling goods in the United States?

Table 31 UNITED STATES BALANCE OF PAYMENTS ON CURRENT ACCOUNT IN SELECTED YEARS

(in millions of dollars)

	1924	1928	1932	1936
A. Merchandise trade				
Exports	4,591	5,128	1,611	2,456
Imports	3,610	4,091	1,323	2,423
Balance of trade	**+981**	**+1,037**	**+288**	**+ 33**
B. Other current transactions resulting in net payments				
1. Shipping and freight	— 46	— 88	— 84	— 89
2. Travel expenditures	—226	—327	—194	—180
3. Personal remittances	—268	—288	—182	—148
4. Institutional contributions	— 71	— 58	— 35	— 28
C. Net receipts from dividend and interest transfers	+462	+647	+325	+298
D. Balances of miscellaneous current transactions				
1. Government expenditures	+125	+145	+ 28	— 64
2. Silver movements	+ 36	+ .19	— 6	—114
3. Miscellaneous	— 18	— 60	+ 19	+ 74
Balance of other current transactions	**— 6**	**— 10**	**—129**	**—251**
Balance of all current transactions	**+975**	**+1,027**	**+159**	**—218**

\+ indicates an excess of American receipts from foreigners over payments
— an excess of payments over receipts

"Invisible" current transactions. In part the answer is furnished by the existence of current transactions, other than merchandise imports, as a result of which Americans make payments to foreigners. During the interwar period, Americans regularly purchased services from foreigners, and sent remittances abroad for other reasons also. Because they are not always easily measured and yet supply foreigners with dollars, such transactions often are called "invisible imports." Among these, we may distinguish four main groups: net payments for foreign shipping services, expenditures by American travelers abroad, immigrants' remittances to their home countries, and foreign expenditures by American charitable, missionary, educational, and other institutions. Table 31 shows that these together would have gone far towards paying for the American export surplus, had they not been largely offset by dividend and interest transfers to the United States by foreign debtors, an item on which (as explained in Chapter 27) foreigners had to spend dollars over and above those used to pay for American merchandise. Finally, Table 31 includes some current items which at different times constituted either a net addition to, or a drain on, foreigners' dollar resources. Except in the years 1935-37, current transactions other than imports did not furnish enough dollars to foreigners to pay for the American export surplus.

CAPITAL TRANSACTIONS AND GOLD MOVEMENTS

Thus, American imports and other current transactions did not, except in 1935-37, provide foreigners with enough dollars to pay fully for the goods and services they purchased from the United States. Evidently the story disclosed in Table 31 is not yet complete, for we have still to take account of capital movements and of imports and exports of gold.

Capital transactions in the twenties. During the 1920's the United States lent, or otherwise invested, large sums abroad. This capital outflow was made up of three kinds of long-term investment. (1) Foreign lending, i.e., the purchase by American investors of foreign bonds issued in the United States. Predominantly, these loans were subscribed by *private* investors, even though the borrowers often were foreign *governments*. (2) Direct investment through the purchase of control in foreign corporations, through the acquisition of foreign subsidiaries by American corporations, or through organization of American corporations for operation abroad. (3) Portfolio investment, or the purchase by Americans of bonds or shares issued abroad. Such purchases differ from direct investment in that they do not generally involve American control of any foreign firms.

In addition to the above forms of *long-term* investment, in some yea substantial amount of short-term capital left the United States through acquisition by Americans of bank balances in foreign financial center the surrender by foreigners of bank balances in the United States. Ei type of transaction enables exports to be paid for, and at the same increases net indebtedness by foreigners to Americans. Yet most of dollar deficit incurred by foreigners in current transactions with the Ur States during the 1920's was balanced by American long-term investmer

Table 32 tells the story. The first line of the table repeats the bal of current transactions from Table 31. We see how, in succeeding en

Table 32 UNITED STATES CAPITAL TRANSACTIONS AND GOLD MOVEMENTS IN SELECTED YEARS *

(in millions of dollars)

	1924	1928	1932	1936
A. Balance on current transactions (Table 31)	+975	+1,027	+159	−218
B. Capital transactions				
1. Net outflow (−) or inflow (+) of long-term capital	−700	−847	+225	+777
2. Net outflow (−) or inflow (+) of short-term capital	− 59	−452	−373	+588
C. Balance on all capital transactions	−759	−1,299	−148	+1,365
D. Balance on current and capital transactions	+216	−272	+ 11	+1,147
E. Net outflow (+) or inflow (−) of gold	−216	+272	− 11	−1,147

* Each credit item (+) in this statement indicates an increase in the command of A over foreign currencies, or a decrease in the command of foreigners over dollars. Each d (−) indicates an increase in the command of foreigners over dollars, or a decrease in the c of Americans over foreign currencies.

each year, movements of capital and of gold liquidated the balance c in the preceding table. In 1924, capital exports fell short of the cred ance on current account, and gold was imported. By shipping gol foreigners could obtain the dollars they needed to finance the excess c

expenditures in the United States over their total dollar earnings and borrowings.

By contrast, in 1928 capital exports exceeded the United States credit balance on current account. This meant that foreigners had received more dollars than they needed to discharge all their obligations in the United States, and consequently we had to send them gold to meet the difference.

The balance of payments in the thirties. The most cursory glance at Table 32 shows that after 1930 the situation changed markedly. The outflow of long-term capital had been reversed, and the movement was now toward the United States. Americans had ceased to lend abroad and had even begun to liquidate their foreign holdings, while Europeans began to send funds to this country for long-term investment. In 1936 and 1939 the flight of capital from Europe is reflected in an import of short-term as well as long-term capital. During the 1930's American foreign lending no longer furnished foreigners with dollars; instead, the rush of foreign funds to the security and relative prosperity of the United States led to an enhanced demand for dollars. The answer was—as seen in Table 32—a flow of gold to the United States on an unprecedented scale. Net imports of gold during the six years 1934 to 1939 amounted to $10,000,000,000. This doubled the stock of gold in the United States and lifted it to around 70 per cent of the world total.

Changes in United States international investment position. It is useful at this point to review the changes which occurred during the interwar period in the United States' position as an international creditor. World War I had speeded the final transition from debtor to creditor status. European belligerents had liquidated many of their dollar assets to finance war purchases. For the same purpose they borrowed heavily in the United States, in the private capital market at first, and from the United States government after America had entered the war. This intergovernmental war debt alone amounted to some $10,000,000,000. Since most of this debt was never repaid and for the most part has now been officially written off, we may neglect the nominal addition which it made to the total American creditor position after World War I, and confine ourselves to the other components. In 1914, America's net indebtedness to foreign countries had stood at $3,700,000,000. By 1919, as will be seen in Table 33, this debt had been transformed into a net credit of the same amount.

American net long-term investment abroad reached a high mark in 1930, but the total creditor position was strongest in 1933, when extensive liquidation of foreign short-term claims in the intervening years had re-

Table 33 INTERNATIONAL INVESTMENT POSITION OF THE UNIT STATES AT END OF YEARS 1919-1939 (EXCLUDING W DEBTS)

(in billions of dollars)

	1919	1930	1933	1939
United States investments abroad				
Long-term	6.5	15.2	13.8	10.8
Short-term	.5	2.0	1.1	.6
Total	**7.0**	**17.2**	**14.9**	**11.4**
Foreign investments in United States				
Long-term	2.5	5.7	4.9	6.3
Short-term	.8	2.7	.5	3.3
Total	**3.3**	**8.4**	**5.4**	**9.6**
Net creditor (+) or debtor (—) position of United States				
Long-term account	+4.0	+9.5	+8.9	+4.5
Short-term account	— .3	— .7	+ .6	—2.7
On long and short-term account	+3.7	+8.8	+9.5	+1.8

duced them below the sum of American liquid assets abroad. From then however, we observe a heavy decline in the United States creditor posit brought about by the movements described in the preceding discuss Long-term assets abroad were more than halved, and a substantial net debtedness was restored on short-term account. At the outbreak of W War II, the net amount owed to the United States by foreign countries, cluding intergovernmental war debts, was less than half what it had l in 1919.

AMERICAN EXPERIENCE WITH FOREIGN INVESTMENT

Something should be said as to the significance of America's experi as a net lender and net creditor, a position she attained only after the of World War I. The experience was not entirely a happy one, either the United States or for other countries. With the onset of world-wide pression in 1930, many debtors—especially among those in Germany the Latin American countries—defaulted on their obligations. At the time foreigners found that even the financially strongest among them c

longer raise any fresh money; for the open-handed and perhaps over-
nerous American lending of the twenties had given place to an unwilling-
ss to make further commitments of any kind.

This experience has led to much questioning as to the future of Amer-
n foreign investment. Obviously American foreign investment during the
enties made payment for the favorable balance on current transactions a
atively easy matter to foreign countries. Obviously, also, the absence of
'eign investment after 1930 led to difficulties, not the least being the ac-
mulation of far more monetary gold than we could ever use. Will the
ited States have an export surplus and a favorable balance of payments
current account in the future, as it has had in the recent past? If so, will
e accompanied by foreign investment? Otherwise, how is such a favor-
e balance to be liquidated?

Dissatisfaction among Americans with their foreign investment experi-
:e during the twenties has centered largely upon the thought that many
the loans were put to "unproductive" uses by the borrowers. Because of
need to make interest payments, and eventually to repay the debt, the
ical question is the ability of the borrowing nation to sell its exports over-
s. The most "productive" use for borrowed funds would therefore surely
the improvement of the debtor's capacity to export. Yet this yardstick
:n is difficult to apply, for it is hard to say whether or not transportation
rovements, power developments, and the like, do contribute in this di-
ion. We may be rather sure, however, that unwise use of borrowed
ds by debtors was a minor cause of default compared with the general
apse of world trade which followed 1930; nor was default as wide-
:ad as is sometimes claimed.

Undoubtedly money was lent to municipal and provincial governments,
Germany and elsewhere, which looked upon American loans as a wel-
ie source for supplementing inadequate tax revenues, or which used
n to finance public works that could in no way contribute to the export-
capacity of the country. In fact, it is hard to apportion the blame fairly
veen reckless spending and reckless lending. The attitude of some Amer-
investment houses which engaged in floating foreign bond issues in
1920's was described in a report of the Department of Commerce in the
wing terms:

> er the high-pressure salesmanship methods by which issues were solicited
> sold, our loans proved to be their own undoing. The flotation of one loan
> iently came to be regarded as adequate justification for further issues to the
> borrower or the same country without adequate regard to the growing

burden of indebtedness. In some instances, notably in loans to Germany, new lending was vigorously prosecuted long after warnings from high places were sounded.[1]

LACK OF A FOREIGN ECONOMIC POLICY

Implications of creditor status. America's unsatisfactory experience with foreign lending reflects the strikingly haphazard character of the external transactions in which Americans were engaged. The very concept of deliberate policy toward foreign economic affairs, now so familiar, scarcely antedates World War II. Public interference with external dealings remained almost wholly confined to the traditional domain of tariff policy. Prior to World War I, America's debtor status lent a semblance of justification to protectionism, since a policy which restricted imports would help to maintain an export surplus. After America's transition to a creditor status, however, protectionism came more and more into conflict with our external financial position.

A creditor nation need not *necessarily* import more than it exports; this is proved by the American record during the twenties. It can maintain an export surplus as long as it concurrently invests sufficient funds abroad to offset the favorable balance of trade. Yet already during the 1920's the contradiction implicit in this situation was becoming apparent. Even while American capital exports were running high, mounting payments of interest and profits to us by foreigners tended to absorb a growing share of the dollars supplied by new investment (*cf.* Tables 31 and 32). In effect, progressively less of the new investment was left to help finance the export surplus. Generally speaking, in order to carry an export surplus on a constant scale, a creditor country must steadily step up its rate of new foreign investment; clearly this requires a snowball process which is not likely to be maintained indefinitely. The sounder long-run policy for a creditor country is to accept larger imports of goods and services as its foreign investments increase.

Persistence in high tariffs. The truth is that the high-tariff policy of the United States conflicted with its new status as a creditor country. This failure of commercial policy to take account of the country's changed financial position was most strikingly brought out by the Tariff Act of 1930. This tariff—described as the highest in American history—was imposed at a time when dollar supply to foreigners had fallen off sharply with the onset of the Great Depression, and after the decline of foreign investment had set in.

[1] *The United States in the World Economy*, p. 4.

onfronted with even higher American duties, debtor countries found it l the more difficult to earn enough dollars to satisfy American creditors. hus, a measure of American policy, in effect, promoted default abroad, id added to the losses of investors in the United States. Foreign coun- ies, not unjustly, interpreted the 1930 tariff as a singular manifestation America's failure to live up to the obligations implicit in creditor status— tacit confession by Americans that they cared more for their tariff than ır what was owed them by foreigners. Worst of all, perhaps, it served as a gnal for the raising of tariffs and other trade barriers in many parts of the orld.

Reciprocal trade agreements program. The Trade Agreements Act of 934 opened a new phase in United States commercial policy, more appro- iate to its role in the modern world economy. This act empowered the esident to lower existing import duties as much as 50 per cent in recipro- l trade agreements negotiated with foreign countries, i.e., in return for riff concessions or other benefits to American exports. By the outbreak of ar, such agreements had, in fact, made some breaches in the tariff wall, it no thorough-going departure had yet been made from the traditional otectionist position.

New inconsistencies. But, even while the trade agreements program ıs getting under way, fresh inconsistencies appeared in the nation's for- gn policies. We have noted the effects of New Deal farm policies in check- g agricultural exports, and the attempt to revive farm exports by subsi- ing them. These subsidies were authorized in the very year of the Trade greements Act, and were adopted at a time when the United States gov- ıment was strenuously objecting to the subsidy by foreign governments *their* exports. Export promotion also provided the motive for the govern- nt's return to the field of foreign lending, which since the early 1920's had left entirely to private capital. The Export-Import Bank, created in 34 and provided with funds by Congressional appropriation, was nomi- ly intended to assist foreign trade both ways, as its name suggests. Ac- lly its early loans were used to assist in the dumping of cotton and other rplus commodities" abroad.

These conflicts of policy have been eloquently criticized by the De- tment of Commerce study from which we have already quoted. What eign economic policy there was, its authors said, was largely predicated on a "manifest impossibility": that of maintaining "a large volume of lar receipts against a small volume of dollar payments." [1]

[1] *The United States in the World Economy*, p. 24.

CHAPTER TWENTY-NINE

The United States in the world economy: postwar

In 1939 international commerce had not yet recovered from the ravages of the Great Depression. As world prices fell during 1929-31, debtor nations found their exports dwindling and their gold and foreign exchange resources subjected to an unprecedented drain. As a result several debtor countries abandoned convertibility of their currencies into gold. Britain, the hub of the world's monetary system, suffered so large a drain of its gold supply that it was soon compelled to follow suit. As the pound sterling depreciated, Britain hoped to overcome the damaging effects of its high costs of production on its exports, but any initial advantages it gained were soon wiped out when other nations joined the parade. When the United States devalued the dollar in 1933, a race for competitive devaluation had really begun.

These developments also affected commercial policy all over the world. After the United States had raised its tariffs to an all-time high by the Smoot-Hawley Act, Britain in 1932 broke with a long-standing free-trade tradition and enacted a protective tariff. Still more serious, perhaps, was the growth of discrimination in international trade. This restrictive trend ranged all the way from mild tariff preferences exchanged between British Empire countries, to attempts by Germany through bilateral agreements to monopolize the trade of the Balkans. The same paralysis was reflected in the extensive institution of exchange controls to harass the traveler and the merchant. For the first time in peacetime history many countries banned the removal of funds beyond their own borders.

By such measures the nations of the world had reduced the traditional system of multilateral, competitive trading to a mere shadow of its former self. Even more to be deplored was the breakdown in international morality and public spirit. Unemployment was an acute problem everywhere. It be-

came fashionable to think of measures to restrict imports or promote exports as means for "protecting" employment at home or for "exporting" unemployment elsewhere. Not only were these selfish policies; as soon as they were adopted by the majority of nations they ceased to benefit any nation. But they made depression more widespread and more lasting. And in 1939 much trade which still flowed between nations was of the hothouse variety, nurtured in artificial channels and sanctified by trade treaties that sometimes savored of blackmail.

PLANNING FOR THE POSTWAR WORLD

World War II cut off a major part of the normal economic intercourse among nations. It shelved, though it did not solve, the problems which had beset the prewar world economy. It also made certain the advent of new and formidable difficulties in its wake. Hence, the task of planning ahead for a sounder economic system in the postwar world had to be twofold. It was necessary, first, to prevent re-emergence of the old unsolved problems, and second, to deal with those created by the war itself. A start was made when peace was still far out of sight. As early as 1941, the governments of the United States, Britain, and other countries, supported by public opinion throughout the free world, set about designing a blueprint which might make easier the difficult transition from war to peace.

Planning in the midst of war was naturally handicapped by many uncertainties. Neither the future course of international politics, nor the precise nature and magnitude of the economic problems ahead, could be reliably foreseen. Assumptions and rough estimates had to take the place of certain prediction. Some estimates were later found to be wide of the mark, and some assumptions turned out not to be valid, including the most important one, that genuine peace and harmony would exist in the postwar world. However, we must give credit to the planners for the fact that the initial transition from war to peace has proceeded more smoothly this time than after World War I, despite much greater political and economic obstacles to peaceful economic recovery.

The leading idea of the blueprint was that of international co-operation. All nations with a substantial stake in the restoration of healthy international trade and investment entered into definite mutual commitments to work together. It began to look as if the chief trading nations, which in the past had mostly worked against each other, finally had learned the lesson that no nation can permanently enrich itself at the expense of its neighbor

THE PATTERN OF LEND-LEASE

Article Seven. The postwar design was first laid down in the dark days of February 1942, when the United States and Britain signed the Master Lend-Lease Agreement. This document set the pattern for similar agreements later concluded with other recipients of lend-lease. Lend-lease aid, in its own right, deserves emphatic mention as a far-sighted measure which did far more than give assistance to wartime allies. By furnishing allied countries with more than fifty billion dollars' worth of supplies and services, lend-lease saved the postwar world from a truly crushing burden of political debt. The debt left by World War I had proved a heavy enough mortgage on the interwar world economy; the new debt would have been five times as large.

More important, insertion in the Master Agreement of its famous Article VII vastly enhanced the contribution which lend-lease made to winning the peace. This article, in effect, pledged the signatories to a comprehensive postwar program of mutually co-ordinated economic policies. It committed the United States, and all recipients of lend-lease who subscribed to it, to take:

> . . . agreed action . . . open to participation by all countries of like mind, directed to the expansion, by appropriate international and domestic measures, of production, employment and the exchange and consumption of goods, which are the material foundations of the liberty and welfare of all peoples; to the elimination of all forms of discriminatory treatment in international commerce, and to the reduction of tariffs and other trade barriers. . . .

In particular, Article VII clearly acknowledged the *international* implications of policy objectives, such as expansion of production and employment, which hitherto had usually been regarded as purely "domestic" in scope.

Stress on expansion. Article VII proclaimed a "philosophy of expansion" sharply in contrast to the restrictive spirit which marked the national policies of the 1930's. The new approach recognized the simple reciprocal relationship which exists between domestic prosperity in any one country and a large volume of international trade. Both depend upon, as well as promote, each other. It was thought that thriving world trade should not be merely a passive by-product of all-round national prosperity, but one of its active supports. Active international exchange helps national economies to keep their labor and other resources efficiently as well as fully employed.

Thus, reliance on world trade promises higher levels of real income than full-employment policies which are tied to self-sufficiency.

If the ambitious aims of this expansionist approach were to be realized, concerted action had to be taken in three main directions. First, member nations in the new international system were expected to take domestic action to maintain high levels of production and employment. Second, their respective national policies had to be complementary rather than competitive. Member nations had to forswear the old "beggar-my-neighbor" mentality and shape their domestic and external policies so as not to detract from, but if possible to add to, the prosperity of other nations. Third, action was necessary to prevent monetary difficulties from driving members into policies destructive of prosperity—as occurred during the 1930's. Balance-of-payments deficits, if they arose, would have to be corrected in "expansionist" fashion, i.e., without detriment to production and employment at home or abroad. Thus, the broad principles of Article VII were elaborated into specific working arrangements for the postwar world economy.

IMPLICATIONS OF LEND-LEASE FOR AMERICAN POLICY

Anglo-American commitments. In calling for "elimination of all forms of discriminatory treatment" and lower tariffs and other trade barriers, Article VII enunciated general principles for all nations. At the same time, it pointed straight at the responsibilities which rested upon Great Britain and the United States, two countries which between them held the key to successful reconstruction of the world economy. Both countries were leaders in international commerce, yet both in the past had violated the rules which were to govern the new world economy. Britain had made itself the center of the Imperial Preference system—a big trading bloc which granted favors to members and discriminated against outsiders. The United States, by its high (if nondiscriminatory) tariff, had severely restricted international competition in the world's biggest market—and by so doing had promoted foreign discrimination against American exports.

The United States' stand on nondiscrimination. American commercial policy has been traditionally opposed to "all forms of discriminatory treatment." Moreover, to reaffirm this principle now was consistent with the basic American conception of the new world economy as an "open" *multilateral* system, in which the traders of no nation would be prevented by governments from buying in the cheapest and selling in the dearest foreign market. Not to discriminate against any foreign nation means to extend equal treatment to all in matters of foreign trade. Or, as one definition has

it, the principle of nondiscrimination admits only one kind of discrimination: that which the market applies against the high-cost producer.

An international system built on this principle would rely on international competition as the main force to insure efficient utilization of each nation's resources. Hence, potentially at least, it would enable the world as a whole to maximize its real income and living standards. Discrimination among foreign nations has in the past been the worst enemy of such competitive allocation of world resources toward greatest efficiency. It promoted "closed" systems—schemes of national self-sufficiency or regional trading blocs. It encouraged pairs of countries which had exchanged exclusive favors to cultivate *bilateral* trade relations. Thus, discrimination often led to production with little regard to costs. Also, it led to domination of small nations by large.

Such was the American case for nondiscrimination, a brief we urged other nations to endorse. The doctrine proved a controversial one, mainly because many foreigners felt that the hypothetical benefits of an "open" competitive system could be bought, if at all, only at the expense of economic stability.

The principle, however, was not defended by the United States on grounds of general doctrine alone. Our past experience, and prospective position in the world economy, added strong special motives for upholding it. As a net creditor and net exporter combined, the United States had been a favored and vulnerable target of foreign discrimination. Some countries had tried to combat their "dollar shortages" by limiting imports from the United States and favoring other sources of supply. Also, the spread of "state trading" in the modern world made it imperative for the United States government, speaking for a society which favors private enterprise, to protect the interests of Americans when dealing with the centralized buying and selling agencies of foreign governments. In general, international policies which would preserve competition in world markets are logical adjuncts of American preference for competitive business at home.

THE INTERNATIONAL TRADE ORGANIZATION

Functions of the ITO. The International Trade Organization deserves first mention among the several agencies which have been set up to carry the idea of co-operation among nations into practice. Its aims and functions are most closely related to the broad directives given by Article VII of Lend-Lease. ITO originated in draft proposals prepared by the United States government in 1944, but it was not until March 24, 1948, at Havana,

that fifty-three nations put their signatures to the Final Act of the United Nations Conference on Trade and Employment, which embodied the Charter of the International Trade Organization.

This four-year interval is itself an indication of the many differences of opinion which had to be resolved before an agreement acceptable to such a wide circle of nations could be written. It is important to note that these differences arose among nations with basically similar political outlooks. The Soviet Union stayed away from the ITO discussions, and of its satellites only Czechoslovakia signed the charter.[1] ITO serves a twin purpose: its charter codifies detailed rules of commercial policy to be observed by all members, and at the same time it provides a forum at which nations can meet to co-ordinate their policies aimed at the maintenance of high levels of production and employment, and the development of economically backward countries.

Production, employment, and development. Each member of ITO undertakes to "take action designed to achieve and maintain full and productive employment and large and steadily growing demand within its own territory through measures appropriate to its political, economic and social institutions." These policies must be consistent with the other provisions of the charter, and in particular they must not be of a kind which would "export unemployment" abroad or bring other nations into balance-of-payments difficulties.

This commitment is consistent with the objectives of the United States Employment Act of 1946 (discussed in Chapter 31), and with comparable legislation adopted by many foreign countries. Should the economy of one member country slump from full employment into depression, it will be required to take steps to counteract the attendant decline of its imports, since otherwise its depression might spread to other nations. These undertakings concern, primarily, industrialized countries. They do not fully meet the needs of nations in a less advanced stage of economic development, still heavily dependent on primary production for export. There, depression is likely to take the form of agricultural production at unremunerative prices. Moreover, such countries are at least as much concerned with speeding up the pace of their economic development as with maintaining economic stability. The charter attempts to meet their special needs by recognizing that

[1] The ITO and the other agencies discussed below are technically "specialized agencies" of the United Nations. Their membership does not coincide fully with that of the political branches of the UN. They have negotiated agreements with the UN which define their mutual relations, but guarantee them substantial independence from the UN within their special fields.

stable agricultural prices and the development of economic resources are as essential to its purpose as maintenance of production and employment in the more advanced economies.

AIMS OF THE ITO: LIBERALIZING TRADE

Rules of commercial policy. The charter's main provisions regarding the commercial policies of ITO member governments may be summed up under three general rules:

1. Members undertake to grant equal treatment to each other with respect to tariffs and other foreign-trade matters, i.e., to adopt the principle of nondiscrimination.

2. They agree to refrain from using quantitative restrictions, i.e., quotas and similar devices, on imports as well as exports. This implies, in combination with rule 1, that nondiscriminatory tariffs are to be the main legitimate device of commercial policy.

3. They undertake to enter into mutual negotiations directed to the substantial reduction of tariffs. In the course of these negotiations countries with preferential tariff systems are to eliminate preferences, and thereby make their tariffs nondiscriminatory.

There are a host of other, more specialized, provisions in the charter, but for the sake of clarity we may concentrate on these three basic points. The first two pledges are in the nature of general principles accepted by members, but the charter provides for numerous qualifications and exceptions to them. These "escape clauses" became necessary in order to reach compromise solutions of differences which otherwise could not have been resolved at all. The charter, in addition, makes adequate provisions for exceptions from the above undertakings for a "transition period" extending over the first few postwar years. No country is to be rushed into living up to all its long-range obligations while its economy may still be suffering from the effects of the recent war.

Opposition to nondiscrimination. We have outlined the position which the United States adopted on the nondiscrimination issue and have briefly indicated the controversial nature of its stand. In the ITO discussions, the United States urged elimination of overt discriminatory policies—such as preferential tariff agreements among sovereign nations—as well as of import quotas and other quantitative restrictions, which by their very nature tend to be discriminatory in application. Foreign countries showed themselves most reluctant to forswear unconditionally and—as they argued—prematurely the use of such policies.

This reluctance rested, in part, on the feeling that American domestic economic policy—despite the Employment Act of 1946—up to the present time does not sufficiently guarantee that stabilization of high levels of production and employment which ITO members have undertaken to achieve in their respective countries. They fear another slump in the United States, which might engulf them and place in jeopardy their own planning for stability. Hence, the stability-minded nations held out until the ITO Charter had conceded what they regarded as adequate safeguards against such an event. As a result, member nations of ITO retain the right to use quantitative restrictions, and to resort to outright discrimination, in carefully specified emergency situations. These escape clauses mention no country by name, but point clearly enough at the United States. Similarly, the provision cited above, which commits each member to counteract a decline in its imports in the event of recession, is aimed primarily at this country. This opposition to the principle of nondiscrimination has come mainly from Western Europe and some of the British Dominions. There, public opinion has come to cherish security and stability as prime objectives of economic policy, and the United States, rightly or wrongly, has acquired the reputation of being a wayward and unstable colossus.

AIMS OF THE ITO: POSITION OF THE UNITED STATES

Inconsistencies in America's position. In this conflict between the ideals of security and stability on the one hand and of competitive efficiency, which the United States has urged the postwar world to endorse, on the other, this country has weakened its own position. For it has given to the opposition cause to doubt American unanimity in upholding the competitive ideal. We shall see, for instance, that American postwar tariff policy has been amended explicitly so as to prevent foreign competition from changing the structure of domestic production. In trying to protect farm interests at home, the United States government itself favored deviations from the basic principles of the ITO. It advocated the retention of import quotas for so-called surplus commodities, so as to defend domestic farm subsidy schemes against foreign competition. Moreover, it has given its support to "inter-governmental commodity agreements" which will deal with international "surplus" problems by procedures reminiscent of restrictive cartel practices current before the war.

When the British—as part of their general opposition to rigid nondiscrimination—won the right to make the abolition of Imperial Preference a very gradual process indeed, the United States claimed for itself the right

to continue preferential agreements with Cuba and the Philippines, which agreements help to protect domestic sugar interests. In short, the United States has exhibited a case of "split personality" to the outside world. Janus-like, this country has appeared to favor competitive markets abroad for its highly efficient industries, while seeking the shelter of restricted competition at home for its relatively less efficient ones, notably for agriculture.

Criticisms from "backward nations." Non-European countries still in the early stages of industrialization have joined the chorus of opposition to American efforts to promote competitive and nondiscriminatory ways of trading (even though they backed America's advocacy of commodity agreements, which met with their own interests). They have revived the old "infant industry" argument in a new form, maintaining that protective tariffs (which the United States would have conceded to them as a means to foster industry) were not enough. These backward nations wanted tariffs reinforced by import quotas, foreign-exchange controls, and other more effective protectionist techniques. This group of nations, mindful of their past experience in selling primary products in unstable world markets, also insisted on the right to apply quantitative restrictions to protect themselves from the effects of deflation in the big industrial countries. For the backward nations depend for their export sales upon the big industrial countries, yet they exercise no influence over the economic fortunes of the latter. On both counts, the ITO Charter granted substantial concessions to less-developed nations. Not all of them were satisfied: Argentina, which had led their protests, withheld its signature from the Havana Charter.

A WORLD ECONOMY VS. NATIONAL PROGRAMS

Obstacles to economic development. The attitude of this group of dissenters reflects a dilemma facing the world economy—a dilemma which will increase in importance as the immediate effects of the war recede. Economic development of backward countries (and areas containing two-thirds of the world's population are in that category) is a worth-while objective, not on humanitarian grounds alone. If the world economy is to recapture that trend of sustained expansion which contributed so much to its success in the "Golden Age" of the nineteenth century, it is imperative that new strata of effective demand be opened up in countries thus far too poor to make their weight felt in world markets. It is equally imperative that their productivity be raised in order to expand the sources of food and raw materials on which a growing world population can draw. These aims may be attained, but only if economic development is directed toward greater inter-

dependence of nations, rather than toward self-sufficiency. In the ITO meetings, however, the backward nations showed a strong desire to develop via industrialization, in order to attain self-sufficiency.

Development and foreign investment. This dilemma extends into the problem of international investment, also broached by the ITO Charter. The nations which hope to speed up their industrial development also hope and expect that advanced nations which have surplus capital funds will make these funds available to them, by restoring the flow of capital into the "backward" sections of the world. Yet their insistence on development for self-sufficiency, combined with their deep-seated fear of exploitation by foreign capital, has led them into attitudes that are unlikely to encourage foreign private investors to resume large-scale developmental lending.

Planning vs. *free markets.* The tendency here in the United States undoubtedly is to consider the private entrepreneur as the "natural" agent in the conduct of foreign trade. This country has sought to promote an international system which would leave wide scope for competition, i.e., for private enterprise in foreign trade. On the whole, Washington has used its influence with restraint and has not challenged the legitimacy of alternative proposals for the reconstruction of foreign trade. Nevertheless, the ITO Charter strongly reflects this country's qualified preference for competitive world markets.

At the same time, the ITO includes many members who favor positive government direction or planning of their domestic economies and often, through various degrees of socialism, rely to a considerable degree on public enterprise. To these nations, it seems "natural" to match domestic planning with planned foreign trade, and public enterprise at home with state trading abroad. Both major types of national planning which concern ITO—for stability and for economic development—can be made more effective if the plans embrace foreign trade. In fact, in countries heavily dependent on foreign trade, the planners regard it as imperative to bring external transactions under government direction. Domestic stability—they argue—cannot be assured if major segments of the home economy are left to follow the unpredictable vagaries of foreign demand. So speak the British.

The ITO Charter, as we have seen, tries to meet this objection. In effect it proposes to underpin the competitive international system by national pledges to keep production and incomes high, and thus to insure a large and stable aggregate world demand for imports. However, the skeptics—apart from regarding these pledges as not specific enough—doubt whether revival of competitive world markets is the most effective method

of bringing about sustained and widespread prosperity. They hold that this objective would be better served by purposive and systematic direction of international trade. More specifically, they argue that countries with common or complementary planning objectives can help each other by planning their reciprocal trade relations. They envisage devices such as long-term bulk-purchase agreements at fixed prices, by which industrial and primary-producer nations might mutually buttress their economic stability.

Bilateral or regional schemes of this kind, however, would almost inevitably run foul of the principle of nondiscrimination. This will happen, for instance, if an importing agency agrees to pay prices above those prevailing in competitive world markets at the moment, in order to buy the benefit of price stability for the duration of a long-term contract. In short, the market behavior of the competitive businessman may be—under some conditions is almost certain to be—different from that of the public enterprise operating under a national plan. Similarly, the principle of nondiscrimination, dear to the believer in order through competition, may be condemned by the advocate of order through planning, as a dogma which forces indiscriminate, haphazard ways of trading on the world economy.

INTERNATIONAL INFLUENCE ON TARIFFS

The Geneva Agreement. In advance of the signing of the Havana Charter, twenty-three member nations of the ITO made a significant step toward one of its objectives by signing the General Agreement on Tariffs and Trade at Geneva, Switzerland, on October 30, 1947. The ITO rules, we may recall, required members to enter into negotiations directed to an all-round reduction of trade barriers, and the elimination of tariff preferences. The General Agreement was the result of the first stage of these negotiations. It is "the most comprehensive international instrument ever negotiated for the reduction of barriers to world trade, having regard both to the scope of its provisions and to the volume of trade which they affect." [1] The tariff concessions exchanged by the signatories apply to products accounting for about two-thirds of their combined import trade. Tariff preferences—especially those granted within the British Commonwealth—have been substantially reduced in the case of many commodities, and in some cases eliminated. No new preferences may be created according to the agreement, and existing margins of preference may not be increased.

[1] *Analysis of General Agreement on Tariffs and Trade*, U.S. Department of State 1947, p. 1 (Commercial Policy Series 109).

Even with these modifications, however, the structure of British Commonwealth preferences remains largely intact.

United States postwar tariff policy. Probably the most important accomplishment of the Geneva Agreement has been to reduce the average level of United States import duties roughly to that of the Underwood Tariff of 1913, one of the less restrictive tariffs in our national history. Concessions of various kinds and degrees were made on products which accounted for 78 per cent of United States imports in 1939. However, the agreement was negotiated under the shadow of postwar changes in American commercial policy which make it hard to assess its actual role in lowering the United States tariff wall.

In February 1947, under the Trade Agreements Act there was made an executive order which required that in any future trade agreement the United States should retain the right to withdraw any tariff concession if "through unforeseen developments, a particular tariff reduction should increase imports so sharply as to cause or threaten serious injury to domestic producers." [1] Interpreted strictly this provision (later incorporated in the 1948 extension of the Trade Agreements Act) means that the United States is prepared to admit new foreign competition, but always short of the point where such competition would enforce, or "threaten" to enforce, changes in the domestic production structure. Since, as we have emphasized above, international competition works its benefits through continually reallocating national productive resources toward more efficient patterns, the implications of this new departure in United States commercial policy are obvious.[2]

THE INTERNATIONAL MONETARY FUND

The Bretton Woods Conference. Even before the ITO had been formed, plans to complement it with co-operation in the spheres of monetary policies and international investment materialized at a conference which met in Bretton Woods, New Hampshire, in 1944. The meeting resulted in the establishment of two international agencies, the International Monetary Fund and the International Bank for Reconstruction and Development. The

[1] *Ibid.*, p. 2.

[2] President Truman's campaign addresses, his message to Congress in January 1949, and his Inaugural Address in the same month, pledge the President to work for a general easing of trade restrictions. His Inaugural Address declared that ". . . we must carry out our plans for reducing the barriers to world trade and increasing its volume." This implies, among other things, a recasting of our own commercial policy along internationalistic lines.

membership of these agencies (which hereafter will be referred to respectively as "the Fund" and "the Bank") coincides broadly with that of the ITO. The Fund and the Bank intend to promote the same general objectives as the ITO, namely, the expansion of world trade and the maintenance of high levels of production and employment among their members. The Fund, like the ITO, is mainly concerned with long-range problems, rather than with immediate postwar recovery. The Bank, by contrast, serves the twin objectives of speeding postwar reconstruction and promoting long-range development of economically backward regions. International differences of opinion as to policy also have arisen in the Bretton Woods agencies. Since these differences of opinion basically concern the same issues as were discussed above in connection with the ITO, we can deal with them briefly.

Monetary conditions of multilateralism. One main purpose of the Fund is to establish the monetary prerequisites of multilateralism. At the same time, it envisages an international monetary system that would support the expansionism which the over-all blueprint tries to impart to the postwar world. Multilateral trade requires, in the first place, mutual convertibility of national currencies. This calls for the elimination of national restrictions on payments to foreign countries, and makes stable rates of exchange between the various national currencies especially desirable. If these conditions are met, each nation will be free to sell in any foreign market, without fear that the proceeds of its exports will be immobilized by foreign-exchange controls or diminished by foreign-currency depreciation. This means that the nation is free to use the proceeds of exports to one market in payment for its purchases in other foreign markets, wherever situated. Clearly too, the same monetary conditions are essential for uninhibited international investment.

To establish these conditions the Fund requires its members to declare foreign exchange rates for their currencies, defined in gold; it requires also that major changes in such rates not be made without the Fund's consent. Members also undertake to remove national foreign-exchange controls which restrict payments arising from trade and other current transactions. Nations whose economies are dislocated as a result of the recent war may retain exchange controls for a number of years, as indeed most members of the Fund are now doing.

Capital (as distinct from current) transactions were exempted from this undertaking, partly because speculative transfers of "hot money" (short-term capital) were a grave cause of international monetary disturbance in

the past, and partly to satisfy member nations which regard the control of foreign investment as an essential attribute of economic planning.

Qualifying provisions. Much like the ITO Charter, and for much the same reasons, the statutes of the Fund specify exceptional conditions in which members may depart from the above obligations—with the Fund's approval. Stability-minded member nations were anxious to retain monetary safeguards, as well as commercial policies, against depression brought in from outside. Hence they obtained a closely circumscribed right to apply temporary foreign-exchange controls if exposed to balance-of-payments difficulties arising from deflationary pressure from abroad. Again, as in the ITO Charter, some of these escape clauses aim implicitly at a possible slump in the United States. This is true notably of the "scarce-currency clause," which requires a nation whose currency has become "scarce" in world markets—as would happen through a decline of imports caused by depression in that country—to supply additional amounts of its currency through the Fund or by foreign lending. If it fails to do so, other members would receive permission from the Fund to restrict their imports from the "scarce-currency" country by discriminatory foreign-exchange controls.

MONETARY NONDISCRIMINATION

With the foregoing important exception, the Fund is devoted to the cause of nondiscrimination in the monetary sphere. Every member must make its currency available at uniform exchange rates to all foreigners, and must refrain from discriminatory "multiple exchange-rate" practices. That is, it must allow unrestricted purchase and sale of its currency for current transactions at a single price. By agreeing to adhere to the exchange values initially declared to the Fund, members forswear the practice of "competitive depreciation," or unilateral reduction of the price of their currency units (and thus of their goods) to foreign buyers, which would give them an artificial competitive advantage in foreign markets. However, in exceptional circumstances and with the consent of the Fund, a member will be allowed to resort to depreciation of its currency.

These provisions of the Fund are directly complementary to the ITO Charter. By agreeing to abolish foreign-exchange controls on current transactions and forswearing competitive depreciation, its members, in effect, agree to abstain from using monetary devices as substitutes for those commercial policies of a discriminatory or unduly restrictive kind which are condemned by the ITO.

Operation of the Fund. In addition to laying down rules of monetary policy, the agreement established a monetary pool made up of assorted currencies contributed by member governments and placed under international control. Each member has paid a specified quota into this pool, partly in gold or United States dollars, but mostly in its own currency. A member who has incurred deficits in trade and service transactions with other members, and has not offset such deficits by importing foreign capital, will be able to buy from the Fund limited amounts of those currencies which it needs to pay its current-account creditors. The member pays by depositing its own currency with the Fund. Once its external accounts are straightened out, the member will be obliged to accumulate gold or dollars with which to repurchase these excess deposits and replenish the Fund's holdings of money other than its own. This obligation is one of several safeguards which the Fund imposes to prevent abuse of its facilities by member governments.

What these transactions accomplish can be realized if we consider the alternative methods by which a country, in the absence of the Fund, might try to restore balance in its foreign accounts when threatened with a deficit. It might restrict its imports—and thereby hurt prosperity at home and abroad—or it might push its exports by subsidies or currency depreciation—practices that are destructive of foreign prosperity and condemned by the ITO and the Fund alike. In short, by going to the Fund, not only will the member be helped to live up to its international obligations, but—even more important—it will gain a breathing spell which it can (and must) use to remove the root causes of its trade deficit by domestic action—say, by reducing costs in its export industries.

Of course, the causes of a nation's monetary difficulties may lie abroad. In this case, other countries—under their various obligations to ITO and the Fund—would be required to take action toward redressing the balance. Thus, availability of the Fund's currency resources will better the chances that its members' balance-of-payments difficulties will be corrected without disturbing production, employment, and trade, and without dangerously depleting national gold and foreign-exchange reserves. The Fund will help to restore balance by using the "expansionist" rather than the "restrictionist" method. "Full employment," it has been said, "requires that any limping balance of payments shall be cured by lengthening the short leg, not by shortening the long leg." [1]

[1] "The Principles of Trade—IV," *The Economist*, London, Jan. 22, 1944, p. 94.

Is the Fund adequate? The International Monetary Fund was built on ertain assumptions which, to date, have proved unduly optimistic. It was nceived as an instrument which would help individual countries, or at orst as an instrument which would help limited groups of countries, to vercome temporary shortages of widely assorted foreign currencies. It ay well be capable of effective and useful functions when its members' ternal accounts are, by and large, in even balance, and where disturb- ıces are slight and limited in time and space. Very different conditions, owever, have prevailed since the end of the war and are likely to continue r several years to come.

Currency shortages—as we have yet to show in detail—have not been calized, but in fact plague almost the entire Eastern Hemisphere and the mericas outside the United States. This also implies that the foreign-change needs of members have not been widely spread over many cur- ncies, but have been heavily concentrated on American dollars, and the ınd's dollar resources are relatively small. Finally, the universal dollar ortage has not been brought about by temporary malfunctioning of the ternational economy, but by profound structural maladjustments which ll take years to remove, and cannot be removed by monetary devices alone. such conditions, the Fund has little to contribute. Not unjustly, it has en described as a "fair-weather ship," not fit to sail on the too turbulent ıs of the postwar world. Somewhat reluctantly—and contrary to the iginal plan—the Fund has been helping to relieve the present dollar short- e out of its limited resources. Perhaps it would have been better to pre- ve these resources until conditions more propitious to the Fund's original sign were restored.

E INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Functions of the Bank. The Bank was created for the twin purpose itten into its name: to assist in the reconstruction of war-torn areas and development of economically backward regions. It is an investment- ıking institution, not a deposit bank. Its main object is to harness inter- ional investment to the general aims of the postwar design for the world nomy. In fact, it is a logical corollary to the International Trade Or- ıization and the International Monetary Fund. The thought is that the nneling of international investment into postwar reconstruction and de- opment will promote balanced expansion of world production and trade.

Promotion of private investment. Contrary to

displace it. Its own resources are limited: of the total capital of $8,340,000,000 subscribed by member governments, only 20 per cent has been paid in, and this consists largely of the domestic currencies of members. The Bank's actual holdings of American dollars—made up of the United States' subscription and the small shares subscribed in dollars by other members—amounted initially to $667,000,000. This is a modest sum in the light of the present vast demand for reconstruction finance, a demand which is overwhelmingly for dollars.

With such limited resources, the Bank depends heavily on private capital markets, which it can approach in two ways: (1) by selling its own bonds and making loans from the proceeds, or else, (2) by guaranteeing bonds issued by member governments or by private institutions in the countries represented by those governments. Because of its substantial reserve fund, the Bank reduces the private investor's risk of suffering from foreign default. Hence, it makes foreign lending safer to the investor, and cheaper to the borrower, who otherwise would have to reimburse the investor for his greater risk by paying higher interest rates. The Bank intends to use its position as intermediary between investor and borrower as a means of placing international investment on a new and sounder footing. The Bank receives loan applications from members, and selects those projects which will most directly and effectively promote the general objectives to which it is jointly committed with the Fund and the ITO. According to its statutes, the Bank is to finance specific reconstruction and development projects whose prospects can be adequately assessed, rather than to grant general-purpose loans to countries in need of foreign exchange.

Problems before the Bank. We have seen that the Bank depends heavily on the willingness of the private capital market to accept its bonds, or bonds bearing its guarantee, on terms which the borrowers will regard as reasonable. In present-day conditions, this means dependence on United States investors, since no other nation has funds to spare for large-scale foreign investment. The Bank depends, similarly, upon the backing of the United States government, which has furnished 38 per cent of its subscribed capital and, through a system of weighted voting, casts 33.65 per cent of the votes which determine the Bank's policies. Moreover, American influence is strengthened by the provision that the floating of loans by the Bank requires the consent of the member nation in whose currency they are made. This raises the question whether the Bank can, in fact, be regarded as a truly international and nonpolitical institution, at a time when the foreign lending policy of the United States has been expressly subordinated to

its political foreign policy. To complicate the issue further, the Bank counts Yugoslavia, Poland, and Czechoslovakia among its members; yet it has announced its intention of supplementing the European Recovery Program, although the latter is actively opposed by the Soviet bloc.[1]

This political dilemma is matched by another which stems from the Bank's twin aims—reconstruction and development. Its statutes require it to accord equal priority to both aims, but up to the time this is written (late 1948) the pressure of European recovery has directed the bulk of the Bank's lending to highly industrialized countries in Western Europe. That is to say, the emphasis has been on reconstruction rather than development. Also, these loans have mostly served general "stabilization" purposes instead of financing specific projects. By September 1948 the Bank had lent a total of $509,000,000 to France, Holland, Denmark, and Luxemburg for reconstruction, but had committed only one loan of $16,000,000 to Chile for development. We shall presently see that this pre-emption of postwar international investment by industrial Europe has extended to United States government loans and grants as well.

THE EUROPEAN PROBLEM

The agencies for international co-operation discussed above are intended to have a permanent existence. It may be many years before their effectiveness can be accurately assessed. Meanwhile, almost before these agencies had opened their doors, the economic situation of Western Europe had deteriorated by mid-1947 to a point where starvation seemed the alternative to further large-scale outside aid. In these circumstances the Marshall Plan was born. Before describing it, we must investigate further the special difficulties of Europe.

Internal disinvestment. In the language of national-income accounting, Europe's problem may be defined as a crisis brought on by a long period of internal and external "disinvestment," or net capital consumption. Within Europe, World War II has eaten into fixed productive capital in many different ways. Industrial plant and transportation facilities have been destroyed or had their capacity sharply reduced by wartime wear and tear. Failure to make normal replacements in wartime has promoted technological obsolescence. In agriculture, fertilizer shortages have reduced soil fertility, equipment is run down, and livestock decimated. Europe's working

[1] *Third Annual Report*, IBRD, 1947-1948, Washington, D. C., p. 13.

capital—its inventories of raw materials, fuels, and finished goods—was similarly depleted at the war's end. Housing had suffered gravely from bombing and from suspension of civilian construction in the war years, and consumers' stocks of durable goods were also at a low ebb.

In short, Europe faced a tremendous task of making good all this wastage of capital if it was to regain prewar living standards for its increased population. This task had to be tackled at a time when the Continent's productive apparatus was run down as never before—a situation which had all the makings of a vicious circle. In starting to cut the backlog of investment needs created by the war, Europe had to save and invest—i.e., withhold from consumption—more-than-normal fractions of its postwar real income. Yet, real income itself was at a low point—in some countries not even high enough to provide workers with the strength and incentives needed for hard work, in others barely above that level. In other words, no surplus for investment existed. In such conditions, an attempt to depress consumption standards in order to save and invest more would have obstructed rather than speeded economic recovery. If Europe was to do both—maintain minimum levels of consumption, and invest enough to start working off the backlog—it had to fall back on resources other than its own. It had, in short, to import more than its exports could pay for, and to pay for its import surpluses out of loans or grants offered by more fortunate countries.

External disinvestment. The effects of internal disinvestment were aggravated by the process of external disinvestment on which Western Europe had started in 1939. Before the war, income from European-owned assets overseas contributed the equivalent of $1,400,000,000 annually toward financing European import surpluses. However, many of Europe's overseas assets were sold during the war, to pay for wartime imports, while others had their earning power reduced by damage or destruction as a result of war in Asia. As a result, Europe's postwar income from investments has fallen to less than one-third of the prewar amount.[1] The bulk of this reduced income, moreover, is collected in currencies other than United States dollars, and comes from countries which do not have surpluses of goods needed by Europe. Hence, even in order to finance imports at prewar levels, postwar European countries would have to rely more on exports of their goods and services, and less on income from foreign investment. The pressure to promote exports is made even greater by Europe's much increased postwar import needs.

[1] *A Survey of the Economic Situation and Prospects of Europe*, U.N. Economic Commission for Europe, Geneva, 1948, p. 54.

UNITED STATES FOREIGN AID

It was the magnitude and persistence of European postwar deficits, and the world-wide sweep of the "dollar shortage," which had not been anticipated by wartime planning. In other respects, the need for the more fortunate Western Hemisphere to come to the aid of Europe and Asia was fully realized. Even before World War II was over, large-scale and seemingly adequate provisions were made for such aid. The United States was naturally cast for the role of principal donor, though other countries took part according to their ability. United States foreign aid was disbursed in part through international agencies, in part directly by the government, and on a minor scale through private organizations. In addition to contributing $2,750,000,000 to the Monetary Fund and committing $3,175,000,000 to the International Bank, the United States put up nearly three-quarters of the $3,700,000,000 which The United Nations Relief and Rehabilitation Administration spent in the countries worst hit by the war.

United States government aid flowed through many channels. Before the war was over, Congress increased the lending power of the Export-Import Bank to $3,500,000,000, to enable it to grant loans to foreign countries which did not qualify for UNRRA aid. In 1946—after the full gravity of the British balance-of-payments problem had been revealed—Congress authorized a Treasury credit of $3,750,000,000 to the United Kingdom. As more and more unexpected "dollar gaps" were uncovered in 1946 and 1947, numerous other government agencies came to take part in financing foreign aid: the War Assets Administration sold on credit war surpluses located abroad; the Maritime Commission gave credits for the purchase of surplus ships; the Commodity Credit Corporation financed raw materials shipped to Germany and Japan; the Reconstruction Finance Corporation made a loan to the Philippines; and the United States Army paid for a mounting flow of relief supplies to the occupied countries. In addition to its earlier commitments to UNRRA, the Monetary Fund, and the International Bank, the United States made available a net total of $18,200,000,000 for foreign aid between July 1945 and the end of 1947. By the end of this period, the funds appropriated were either spent or were rapidly running out, while foreign deficits continued to rise.

Use of foreign gold and dollars. Countries in need had not relied exclusively on loans and grants from the United States and a few other countries. Since the end of the war they had also been using their gold and liquid dollar resources to cover portions of their deficits. European gold reserves

and dollar balances were reduced by $2,400,000,000 in 1946-47, and those of all foreign nations by $5,200,000,000. The 1947 rate of drawings on these sources foreshadowed an early depletion of foreign dollar balances below the minimum levels needed to finance current trade operations, and of monetary gold reserves held by foreign countries below the legal reserve requirements of those nations.[1]

The Marshall Plan. By early 1947 it had become clear that European recovery was bogging down and might collapse entirely if Europe was compelled to curtail its imports sharply in view of the imminent exhaustion of all available means for financing its trade deficits. Increased political tension provided a strong additional motive for buttressing the economies of Western Europe, and speeding recovery throughout the world. It was also clear that some new approach was needed, for the question could rightly be asked whether the United States was not pouring its money—and the goods which went with it—down a "rathole." Such a new approach was suggested by Secretary of State Marshall in his address at the Harvard Commencement exercises in June 1947. Acknowledging that Europe "must have substantial additional help or face economic, social, and political deterioration of a very grave character," Mr. Marshall said:

> Before the United States Government can proceed much further in its efforts to alleviate the situation and help start the European world on its way to recovery, there must be some agreement among the countries of Europe as to the requirements of the situation and the part those countries themselves will take in order to give proper effect to whatever action might be undertaken by this Government. . . . The initiative . . . must come from Europe. . . . The program should be a joint one, agreed to by a number, if not all European nations.

This approach put on Europe the responsibility of co-ordinating the recovery programs of its various nations according to a common plan which would stress mutual self-help, and the pooling of European resources toward maximizing its production and its ability to pay for needed imports.

European Economic Co-operation. Sixteen nations—covering all Western Europe with the exception of Spain—formed a Committee of European Economic Cooperation which drew up such a four-year plan in the summer of 1947. Their plan revealed a gap between requirements and resources which was truly formidable, even after all the possibilities of self-help which seemed practicable in such a relatively short period had been considered. The total dollar deficit for the 1948-51 period was estimated at $22,400,000,000. This

[1] *Report of the National Advisory Council on International Monetary and Financial Problems, October 1, 1947-March 31, 1948*, Washington, D. C., 1948.

estimate, the committee stressed, implied "no extravagant importing; food consumption at the end of the period will be less than the prewar level per head and . . . in many countries restrictions on consumption of food, clothing and gasoline . . . will continue to be necessary." [1] Some of this deficit, it was hoped, could be met by reconstruction loans from the International Bank, but the United States was asked to foot the bill for the major portion.

The Foreign Assistance Act. In December 1947 the President asked Congress to authorize a four-year European Recovery Program (the Marshall Plan) to cost $17,000,000,000, or rather less than the figure at which the European nations had assessed their four-year deficit. Congress refused a definite commitment for the entire period, but the Foreign Assistance Act, approved in April 1948, authorized appropriations for European aid to a total of $5,300,000,000 for the one-year period following its enactment. One billion dollars was to be supplied in the form of loans, the rest in nonrepayable grants. An administrator for Economic Co-operation (Mr. Paul Hoffman) was appointed. Europe's needs were to be reviewed at the end of the first year of the program, and additional funds appropriated as required. By providing that only one-fifth of the first year's aid should be extended in repayable loans, the act virtually revived the principle of Lend-Lease. Even though the assistance offered Western Europe fell short of European estimates, and Secretary Marshall stressed that the cost of the program in its first fifteen months would amount to "less than a single month's charge of the War," the scale of ERP bore eloquent testimony to the price of economic leadership in a shaken world.

POSTWAR POSITION OF THE UNITED STATES

Uneven impact of World War II. In 1947, the aggregate volume of goods produced in the world as a whole was estimated at 10 to 15 per cent above the level of 1938.[2] This figure, at first glance, may testify to a rapid rate of postwar recovery. However, by striking a world-wide average, and not discriminating between industrial and agricultural goods, it conceals a most serious lack of balance in the postwar world economy. The Western Hemisphere, and the United States especially, has enjoyed a formidable production spurt during the past decade. By contrast, Europe and the Far East have suffered great losses in productive capacity and a serious setback

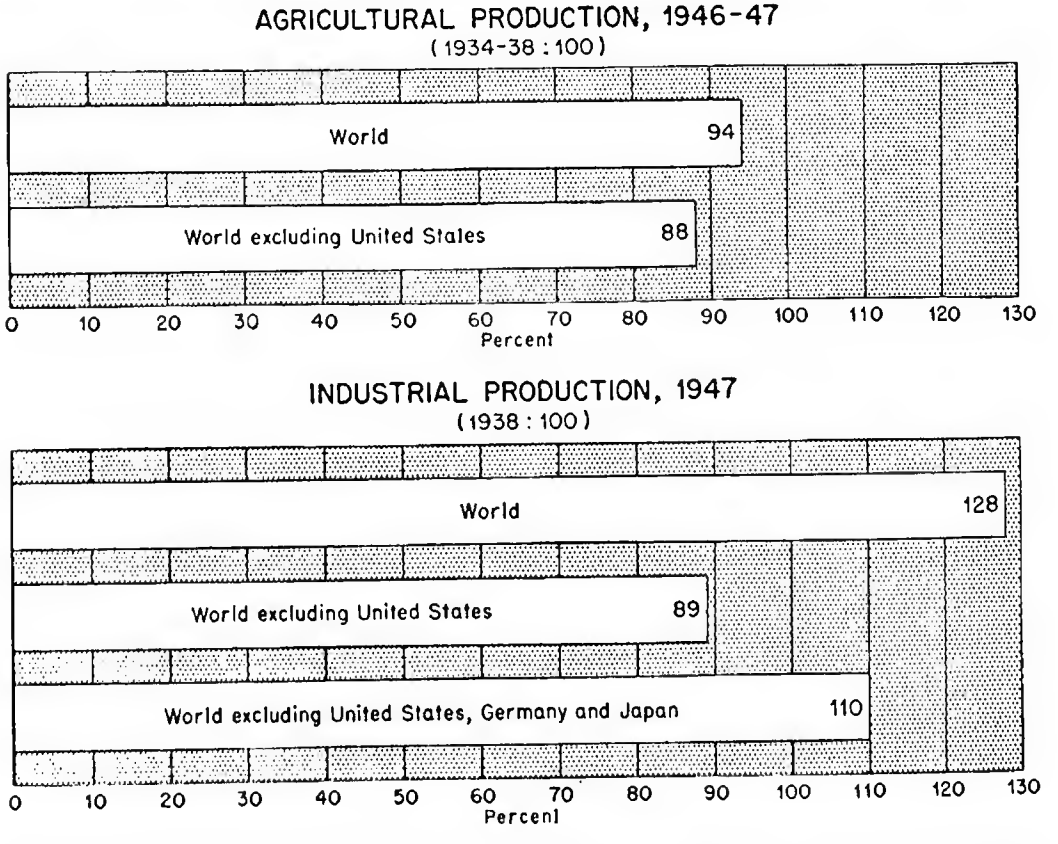
[1] *Committee of European Economic Cooperation: Volume I, General Report,* Department of State Publ. 2930, Washington, D. C., 1947, p. 59.

[2] This figure and those in the paragraphs immediately following are quoted from *Selected World Economic Indices,* United Nations, Lake Success, N. Y., 1948.

in economic growth. At the same time, world agriculture has lagged behind industry, thus adding to imbalance in the postwar world.

Lack of balance in world industry. Fig. 28 shows industrial production in 1947 at 128 per cent of the 1938 level for the world as a whole. Yet, industrial production in all countries (excluding the United States) was still

Figure 28 **WORLD PRODUCTION IN 1947 AS A PERCENTAGE OF PREWAR**



more than one-tenth below prewar. This indicates that it was very largely the spurt of growth in United States industries which brought the 1947 global total so far above prewar. However, Fig. 28 also makes it clear that conditions in other countries were far from uniform. In Europe, the pace of industrial recovery has been particularly slow in Germany. In the Far East, Japan has similarly lagged behind. Both were major industrial nations before the war, and what happens to their industries must significantly affect the global trend. If we subtract from the world total both United States industrial production (which doubled between 1938 and 1947) and that of Germany and Japan (which was at less than half of prewar in 1947) we find that the remaining countries, between them, produced one-tenth

more industrial goods than they did in 1938. This reflects fairly rapid recovery in Western Europe outside Germany, the return of Soviet industry to its prewar rate of output in late 1947, and finally, some war-induced industrial expansion in Canada, Latin America and other non-European regions. We may note, however, that recovery in Western Europe has been accelerated by contributions from the prosperous Western Hemisphere, principally in the form of United States government aid.

Lag of world agriculture. The divergent trends of industrial production in the two hemispheres during the 1938-47 decade are matched by a no less serious lack of balance between world industry and agriculture. Fig. 28 shows agricultural production in 1947 at only 94 per cent of the 1934-38 average. Here again, detailed inspection of the world trend would reveal that farm output in the United States stood higher, but in the rest of the world lower, than prewar. The lag of agriculture has retarded recovery and has added to the import needs of Europe and the Far East. The long-range implications of such a lag are even more critical in view of the increase of the world's population by some two hundred million during the past decade, and its continued growth by some twenty million persons per annum.

Economic ascendancy of the United States. The contrast between accelerated economic growth in the United States, and the setback inflicted by World War II on Europe and Asia, clearly implies that this country's dominant economic position in the world has been greatly strengthened during the past ten years. Today its national economy is truly a giant among dwarfs. According to one estimate, "the national income of the United States in 1946 was five times that of the country with the second highest income in the United Nations and 3,000 times larger than the country with the smallest." [1] The extent of its economic ascendancy is illustrated by the fact that in 1947 United States output accounted for 48 per cent of the coal, 64 per cent of the steel, 46 per cent of the electric power and a full 84 per cent of the motor vehicles produced by all countries of the world excepting the Soviet Union. The United States' share in the world's merchant fleet, on a tonnage basis, increased from 14 per cent before the war to 43 per cent in 1947. With such preponderance, one need not wonder that all foreign nations are anxiously watching the course of America's economic fortunes.

Role of the Soviet Union. We have just compared United States production figures with world totals which omit the Soviet Union. This ap-

[1] *The Restoration of World Trade.* Carnegie Endowment for International Peace, 1947, p. 527 (International Reconciliation Series No. 434).

proach is made necessary by the simple fact that the Soviet Union, unlike other nations, does not publish its industrial production figures. However, it is also a meaningful comparison and it does not unduly neglect the role which our powerful antagonist in world politics plays in the postwar world economy. The Soviet Union was a nearly self-sufficient economy before the war, and it has now reverted to an economic policy designed to make self-sufficiency even more complete. Just as Soviet prewar trade accounted for less than 1 per cent of world trade, its foreign transactions today are extremely small. Even the emergence of a Soviet bloc of satellites, more or less closely tied to the Soviet economy, has a smaller direct impact on the structure of the world economy than one might expect. Roughly nine-tenths of postwar world trade moves without touching the Soviet orbit, and moves within that wide circle of nations which have joined the ITO and the other agencies of international co-operation. Even without benefit of industrial statistics, we know that the Soviet Union has restored her *domestic production* to about its prewar level. Yet for the reasons given above, the student of the *international economy* can afford to take less notice of the Soviet Union than the student of world politics is compelled to do.

POSTWAR FOREIGN TRADE OF THE UNITED STATES

How much do we trade? Has this great increase in America's economic power been paralleled by an increased participation in foreign trade? The record levels reached by United States imports and exports after the war may, at first glance, invite an affirmative answer. In absolute terms, and even after allowing for inflated dollar values, the United States is exporting much more, and importing somewhat more, than ever before in its peacetime history. However, if our foreign trade figures have soared, domestic production has risen even higher. In relation to the value of the gross national product, the value of United States exports was actually smaller in 1946-47 than in the years immediately after World War I. The postwar increase of our exports has been uneven, being attuned to abnormal relief and reconstruction needs abroad, and has been heavily concentrated in a few groups of commodities such as foodstuffs, machinery and vehicles.

The postwar trend of our imports shows even more clearly that the United States is *relatively* less dependent on foreign supplies than it was before World War II. Our imports in 1947, large as they were, were smaller in relation to our gross national product than in 1929 and 1937, the two most prosperous interwar years. Even more significant, the gross national

able 34 **UNITED STATES BALANCE OF PAYMENTS ON CURRENT ACCOUNT, 1939 AND 1947**

(in millions of dollars)

	1939	1947
A. Merchandise trade		
Exports	3,177	16,022
Imports	2,318	6,047
Balance of trade	**+859**	**+9,975**
B. Other current transactions resulting in net payments		
1. Shipping and freight	— 64	998
2. Travel expenditures	—155	—357
3. Personal remittances	—108	
4. Institutional contributions	— 43	—695
C. Net receipts from dividend and interest transfers	+311	+800
D. Balances of miscellaneous current transactions		
1. Government expenditures	— 55	—1,753
2. Silver movements	— 77	—
3. Miscellaneous	+ 64	—140
Balance of current transactions other than merchandise trade	**—127**	**—1,147**
Balance of all current transactions	**+732**	**+8,828**

- indicates an excess of American receipts from foreigners over payments
an excess of payments over receipts

ıct in 1947 exceeded that of 1946 by some 10 per cent, but the physi-
olume of 1947 imports—i.e., their dollar value adjusted for price in-
s—actually fell short of 1946.[1]

he export surplus problem again. This failure of imports fully to
domestic economic growth calls attention to a problem familiar in
r days, that of the United States export surplus. Net merchandise ex-
in 1947 reached a peak of almost ten billion dollars. Moreover, ship-
nd freight charges, which were a consistent prewar debit to our bal-

or these comparisons, *cf. Eighteenth Annual Report*, Bank for International Set-
s, Basle, 1948; reproduced in *Federal Reserve Bulletin*, October 1948.

ance of payments (and so had helped foreigners to pay for goods th bought in this country) has been converted into a net annual credit amour ing, in 1947, to $1,000,000,000. Table 34 shows this reversal, as well as oth changes in our balance of payments between 1939 and 1947. The most i pressive change is shown by the final item in the table: the net balance d the United States economy as a result of all current transactions was twel times as great (in current dollars) in 1947 as it was in 1939.

As Table 35 shows, the postwar export surplus exhibited a novel f ture apart from its size. It had become universal in a geographic sense. I fore the war, heavy export surpluses to Europe and Canada were acco

Table 35 MERCHANDISE TRADE BALANCES OF THE UNITED STAT BY REGIONS, 1938 AND 1947

(Export Balances in millions of dollars)

Region	1938 Semi-annual average	1947 First half	1947 Second half
Europe	377	2,454	1,951
Latin America	39	937	879
North America	104	542	448
Asia	— 24*	451	399
Africa	32	269	226
Oceania	39	37	128

* Import balance.

panied by small ones to Latin America, Africa, and Oceania, and net ports from Asia. In 1947 all of these regions took more goods from us t we took from them. Such a pattern naturally prevents multilateral se ment of net exports in some directions by net imports from others. dently this big world-wide United States export surplus must result universal deficit in trade with the United States—in other words, a w wide "dollar shortage."

Net exports financed by government aid. So far, the postwar ex surplus has been financed mainly by United States government aid, su mented by heavy foreign drawings on accumulated dollar balances, sal gold to the United States by foreign countries and liquidation of dolla curities owned by them. The latter three sources were close to exhau by the middle of 1947. From this point on, United States governmen became the main factor which made the export surplus possible, an volume of such aid set limits to the surplus. The decline of most e balances in the second half of 1947 shown in Table 35 indicates that

eign countries proceeded to cut their coats according to their cloth, and restricted their purchases in the United States to the total of their own dollar earnings plus whatever dollar aid they obtained. It seems obvious that until 1951—the tentative terminal date for the European Recovery Program—United States government aid will continue to finance a substantial surplus by the United States on current account, if on a diminishing scale.

Export prospects. What are the prospects for United States exports in the longer run—when they are once more limited to *trade*, and cease to be a blend of trade, charity, and politics? At this point, questions suggested by our interwar experience will emerge again. Should the United States acquiesce in greatly reduced export levels? This would involve considerable and possibly painful domestic economic readjustments. If a cut in the level of exports is inevitable, should we plan ahead for it, in order to make the transfer of human and other resources which now produce for foreign markets less costly and painful? Should we, alternatively, leave these adjustments to be enforced by the import restrictions of foreign countries afflicted with "dollar shortages"? Or should the United States, perhaps, counter such foreign restrictions by export subsidies, export-promotion loans and such like? Can and should the day of readjustment be postponed by resuming private investment which, as we know, will ultimately lead to an even greater need for foreign countries to earn dollars.

Clearly, there is a danger that failure to face these problems before they arise may bring the United States and other nations back to policies reminiscent of the 1930's and incompatible with the obligations which they have assumed. The spirit, if not the letter, of these obligations demands that balance in the United States' external accounts be restored at a high, rather than a low, level of transactions—preferably, that is, by lengthening the short "import leg" of our balance of payments before it starts limping again. Will this be possible?

Prospective import demand. Can the United States import enough? In order at least to assemble the factors which bear upon the answer to this crucial question we must assess the various influences that govern our demand for imports. We know that their volume is greatly affected by cycles in domestic business. Therefore, the most important prerequisite for a large volume of United States purchases from abroad is stable prosperity at home. Also, domestic prosperity must be coupled with readiness to admit foreign products even when they compete with domestic production. On this count, we have seen that the early auguries of postwar United States tariff policy have not been altogether propitious. As to prosperity as a means

of expanding imports, we have noted that the domestic economy reached an unprecedented level of production and employment in 1947, while the physical volume of imports actually declined in that year. Hence, domestic prosperity is clearly a *necessary* condition of better balance in our trade account, but we cannot be sure that it is a *sufficient* condition. Merchandise imports in 1947 covered only three-eighths of the value of exports. To some extent we may attribute the lag in our postwar imports to the inability of Europe and Asia to resume their exports on the prewar scale. But this would not necessarily mean that the lag will be made good once foreign recovery has advanced further. A ten-year interruption in the accustomed channels of trade has, inevitably, promoted domestic production in place of imports. Wartime technological developments and the tense postwar political situation also have made for greater self-sufficiency on the part of the American economy. Our new synthetic rubber industry and our much increased merchant fleet are cases in point. Both are receiving substantial public subsidies, justified mainly on strategic grounds.

However, one can also discern offsetting changes, making for a greater import demand. The record levels of postwar production have induced several major industries to seek new foreign sources of raw-material supply. Thus, the United States has turned from a prewar exporter of steel scrap into a net importer, and imports of crude petroleum have increased sharply. If general domestic production remains at high levels, it may become progressively more necessary to supplement domestic natural resources with imports of many kinds. The need to conserve some of our natural resources, or even actual depletion, may open up new sources of import demand, and strategic stockpiling programs might do likewise.

Invisible imports. "Invisible" import items may ultimately come to the assistance of merchandise imports as a means of offsetting the export surplus, though at present such transactions claim more dollars from foreigners than they furnish. The merchant fleet, subsidies notwithstanding, is carrying a diminishing share of American foreign trade and is withdrawing from competition on some routes as foreign fleets are being rebuilt. In time (strategic considerations permitting) this may restore a net import balance on account of shipping services. Foreign travel by Americans might become a more important dollar outlet than ever before—again given domestic prosperity and political tranquillity abroad.

But these are somewhat uncertain trends, and they are overshadowed by one which will make for larger receipts on "invisible" account: investments by foreigners in the United States have been reduced during and since World War II, and investment earnings with them. Conversely, for-

eign countries have incurred considerable postwar debts to this country. Most of these loans relieve the debtors of service and repayment obligations until 1952 or thereabouts. After that, foreign debtors will be expected to find dollars for debt service, and this will go far to offset whatever net dollar earnings might accrue to them on the rest of the "invisible" account. In sum, it is hard to be optimistic about the United States' prospective ability to balance its current account through larger imports, i.e., without a heavy reduction in American exports. Of course, this statement assumes that exports for recovery or for relief, financed by government grants, have not come to stay.

SECTION NINE

CONTROL OF OUR ECONOMY

30 The problem of economic planning

31 The question of full employment

32 The problems with which we conclude

SECTION NINE

CONTROL OF OUR ECONOMY

INTRODUCTION

Our account of how the American economy operates is now complete. This final section adds nothing to that account. It attempts instead to draw together certain implications arising from what has been studied, and to place our subject matter in a somewhat wider setting so that we may consider what values are most important and what our policies should be with regard to them. To do this will require all the knowledge of the American economy that we can muster.

First, a brief survey of the ground that has been covered. We began with a statement of the kinds of problems that would be studied: special emphasis was laid on the problems of economic stability and economic control. We next examined our several kinds of productive resources and the ways in which they are organized and used. This was followed by an account of the productiveness of our economy, a description of the way in which the product is distributed in the form of income, and an analysis of those cyclical fluctuations of output and income which are the principal expressions of instability in our economy. Our next concern was with the way in which production is organized through business enterprises seeking profits, with special regard to the corporate form of organization and to some of the causes and effects of the growth in size of business units.

We next surveyed the material conditions affecting several groups of our people: wage earners, farmers, consumers, and the underprivileged, with a view to finding what interests the members of each group have in common, and the grounds for conflicts of interest between these several groups and other elements in the economy. From this set of problems, we turned to a study of our complicated financial system, involving the issu-

ance and use of money and of various forms of credit; these were seen to exert a powerful influence on both stability and control in our economy. All this was followed by an examination of the gigantic financial operations of our government, with principal regard to the ramifying economic effects of governmental expenditures, governmental revenues, and the public debt. We next studied our ways of doing business with foreigners, how this business affects both them and us, and the stability of our economic relations with foreign countries as it is influenced by public policy and by international politics.

Now, in this final section, we shall be concerned with value questions, with questions of what ends are important, or good, or desirable, and of suggested ways of attaining these ends through economic planning, or through policies of government.

Most of the economic conditions and processes we have studied exist in, or are a function of, the *market*. They involve transactions, buying and selling. And transactions, traditionally, represent a meeting of minds between two parties in the form of a simple *quid pro quo*. Yet in most of the transactions we have been concerned with, a third party, the *government*, has been conspicuously involved. Its involvement has varied from that of umpire (as when the NLRB decides that a certain union does or does not represent as bargaining agent the employees of a certain company), to that of protector (as in the conduct of the social security program), to that of operator (as in the case of TVA), to that of creator (as when a corporate charter is issued), even to that of dictator (as in the use of rationing, priorities, and allocations under the emergency conditions of wartime planning). These various forms of participation by government in transactions fall outside the ordinary judicial processes of establishing innocence or guilt, punishing lawbreakers, and defining the rights and duties involved in contracts.

All this injects complexity into what was described above as traditionally a simple *quid pro quo*. But its disturbance to our minds runs deeper than that. The manifold intrusions of government into what once were thought of as simple affairs have created a mixed economy. We have neither pure laissez-faire liberty nor pure authoritarian control, but we have elements of both. This makes the understanding of economic affairs more difficult than would be the case with either form of "pure" economy. Not only is understanding rendered more difficult; economic matters inevitably bulk large on the political scene. A *mixed economy* does not lend itself to slogans or formulas or short declarations of principle. In such an economy, issues of policy have to be decided on their merits, not through appeals to

any abstract article of faith. We cannot say, with the old-fashioned liberal, "Government is bad, the less of it the better"; nor with the Marxist, "The state is everything, all power to the state."

But to regard government as a means rather than as an end is to put its role right at the center of the political controversies of our time. Men want different things from government and they differ, too, as to what government can achieve. Politics is the art of resolving such differences. It is at once inevitable, and entirely right and proper, that questions of economic policy—of the role of the state in economic affairs—should often occupy the center of the political stage.

CHAPTER THIRTY

The problem of economic planning

The American economy in operation is a mixture of conflict and co-operation. In preceding chapters some emphasis has been laid upon "conflicts of interest." Yet, both ideally and in fact, our economy gives rise to two forms of co-operation: (1) through the market; (2) through community action. The remote villager lacks a bus service, the city dweller cannot play golf, unless neighbors in sufficient numbers desire these same things. Some vast projects, such as slum clearance, highway development, the provision of hospital services and educational facilities, can be carried out only through widespread co-operation. Yet most commonly we rely upon money demand in the market, exerted by numerous people who want the same or similar things, to secure the degree of co-operation that is needed. Without the co-operation encouraged by the market our economic system would not work at all. In other cases co-operation through common action, rather than through the market, is necessary; for instance, in the provision of schools and highways. As we become better supplied with the world's goods, many fresh needs can be satisfied. Some of these newer objectives, too, can be attained through the familiar operation of the market. Others, as with many existing services, can only be provided by community action through national, state, or local government.

What may we expect from the continued improvement of the productive arts? Cheaper goods and services for individual purchase? More highways, state parks, and other community facilities? Wider choice of occupation? Shorter working hours? Even in the world as we know it today many people would prefer a society with less marked extremes of wealth and poverty or with greater security against unemployment. Because of a fear that some or all of these desirable things cannot or will not be furnished conveniently and effectively through the ordinary operation

of demand in the market, but must be provided (if at all) through governmental action, the idea that the government should *plan* the use of resources has been often proposed. The purpose of this chapter is to discover what we mean by "planning," to describe certain types of economic planning, and to inquire how much planning in the economic sphere our government actually does. We shall also consider some of the arguments that have been advanced for and against the view that we need more planning than we have at present.

PUBLIC SUPPORT OF ECONOMIC PLANNING

Complaints that our economic arrangements are not sufficiently planned, and pleas that the government should undertake more extensive planning of production and employment, have naturally been heard most often in periods of poor business. Proposals for economic planning in the United States were particularly numerous during the Great Depression of the 1930's. Many such proposals were inspired by the example of Soviet Russia; at that time Russia was engaged in a series of much-publicized "five-year plans" and appeared (unlike the United States and other Western countries) to have no problem of unused resources. The plans propounded ran the entire gamut from elaborate ideas for the self-regulation of industry (some of which were embodied in NRA), or very simple ones based upon straightforward currency inflation, all the way to the revolutionary notion that we should immediately adopt the main elements of the Russian economic system. Undoubtedly the passage of many New Deal measures of economic reform or industrial regulation was eased by the prevailing sentiment, although the New Deal as a whole was too inconsistent and insufficiently co-ordinated to offer a good example of planning.

With the outbreak of World War II the United States entered upon a period of genuine economic planning, albeit planning of a temporary character and for a limited objective. Concentration of resources upon the prosecution of war required that they be allocated (by the War Production Board) according to a central program, and that the flow of components be carefully co-ordinated; these are the hallmarks of a comprehensive plan. Conversion of peacetime facilities to war production had to take place fast, and new machinery had to be distributed according to clear-cut priorities imposed from above. Scrambles there were, for labor and for consumers' goods, because the distribution of neither was adequately cared for in the plan. If the plan was less than perfect, yet the goods were produced, and

for the most part they were of the quality specified and were delivered on time.

The plan used to mobilize the resources of the American economy for fighting World War II involved—or, at least, was accompanied by—restrictions upon the individual's freedom of action. Strategic materials could not be bought without a permit; consumers' goods were rationed; practically everything was price-fixed; the war worker found himself frozen in his job. Many of these restrictions were undoubtedly essential to the success of the plan, and all were thought to be so. They were accepted, and were in the main observed, as part of the price that had to be paid for winning the war.

THE POSTWAR SHIFT IN PUBLIC ATTITUDE

As soon as victory had been won, an inexorable pressure developed for the removal of wartime controls. The truth appears to be that people will submit to all manner of restrictions, petty or severe, if they are convinced that the restrictions are necessary to defeat an enemy in wartime; to do otherwise would be considered unpatriotic. But once the war is over, the typical citizen of the United States, rightly or wrongly, seems to prefer to take his chance in the general scramble for peacetime jobs, goods, and customers, rather than allow himself to be reconverted, officially if not painlessly, by some government agency. He thinks—again, rightly or wrongly—he knows at least as much about how to bring back the piping times of peace as any bureaucrat in Washington. As soon as hostilities ceased, an inexorable pressure therefore arose for the sweeping away of all wartime controls. Raw-material restrictions were immediately eased, war-industry workers were free to take other employment (in fact, large numbers had no other choice), rationing of consumers' goods was abolished before the end of 1945, and price controls were lifted during 1946.

In view of what happened in the period immediately following the Japanese surrender, the faith of those who believed reconversion would come about easily and speedily without any centralized direction or plan seemed to be justified, in large measure, by events. Peacetime production soon started up and industry was able to absorb without difficulty, not only the many displaced war workers, but also most of the discharged veterans. Certain shadows in the picture there certainly were. The inflationary movement, which had commenced much earlier as a result of defects within the wartime economic plan, gathered speed as controls were removed and reconversion progressed; the cost of living rose sharply, and there also were widespread strikes. By and large, however, the rapid abolition of wartime

restrictions appeared to have facilitated the return to peacetime conditions. Moreover many people believed that, as soon as peacetime goods were again available in quantity, the upward movement of prices would be checked.

In the postwar years therefore public opinion is far less favorably disposed toward the general idea of economic planning than it was in the middle 1930's. Specific controls may still have their individual proponents. Because of the especially sharp increase in the price of foodstuffs during 1946-47, many town dwellers thought that the abolition of rationing and price ceilings had been a mistake. The sheer numbers of people who do not live in their own homes insured continued popularity for the control of residential rents. Yet, despite such exceptions, the popular attitude toward governmental interference in economic affairs is still strongly conditioned by unpleasant memories of wartime controls. Economic planning may have been necessary to win the war, but the planners stepped on a great many toes. Some of the regulations were of such a kind that persons affected could not readily see their relation to the war effort. Paper work mounted and red tape piled up. The opinion crystallized, in the minds of businessmen especially, that economic planning by a centralized bureaucracy was something which in peacetime we could well do without.

This shift in public opinion between the period of the thirties, when "some kind of plan" was eagerly urged by many people, and the postwar period, when the greatest urgency attached to getting rid of existing controls and restrictions, throws little light upon the validity of particular proposals or programs of economic planning. It may mean only that people want their government to develop and execute a plan that will extricate them from their difficulties when they are in trouble, and that they want their government to offer no interference to their acquisitive activities when such activities are yielding a rich harvest. It is clear that quite different groups of people shared, in quite different ways, in the intended benefits of planning under the New Deal, and each of these groups was outspoken in its demands that its own interests be promoted by a plan. The NIRA fostered planning by business groups in their own interests; previously such planning would have been held in violation of the Sherman Act. The AAA was a government-administered plan to restore staple agriculture to a position of solvency and profitability. There were plans in the interests of bankers, of debtors, of creditors, of organized workers, of most elements in the community except consumers. The period of the New Deal was a time of general difficulty, in which people of different—even opposite—interests favored governmental controls or regulations in behalf of their respective and separate selves. The action taken itself reflects a strikingly

different attitude toward intervention by the government than that which has prevailed since the end of World War II. But whether the measures of the New Deal, in detail or as a whole, are properly to be regarded as economic planning requires consideration of what economic planning is.

KINDS OF PEACETIME ECONOMIC PLANNING

Centralized direction of the use of resources, undertaken by the federal government in wartime, is very far from being the only type of economic planning which is—or could be—practiced. Indeed, of the many examples of planning which might be cited, centralized control of the resources of an entire nation is one of the most complex. It was chosen as the starting point of this discussion because it bulks largest in public controversy and raises the most numerous issues. These issues will be more readily understood if first we survey some simpler types of planning.

Consumers' plans. The simplest example of an economic plan is furnished by the decisions of any intelligent and reflective consumer who disposes of a given money income. To make the most of his resources he must balance his present needs against the cost of satisfying them. If he spends too much for shelter, he may go short of food; if he renounces beer and movies, he may be able to afford a radio; and so forth. But he must also exercise foresight. For instance, he may decide to save some of his income, in order to provide against possible emergencies or because he anticipates more urgent needs in the future than he has today. Thus consumers, if their spending is not to be entirely haphazard, have to formulate plans.

Planning by business firms. The decisions which a business executive must make differ sharply from those of the individual consumer, but the same need for co-ordination is apparent. Whether to expand or contract output, how much to spend for advertising, whether to manufacture for stock or to lay off workers in slack times, whether to launch a fresh line—such decisions are tied together in a single "budget," or plan, for the ensuing month, quarter, or twelve-month period. Such a budget will show on the one hand the expected receipts from sales, and on the other the amounts allocated for various categories of expense. In addition the businessman, like the consumer, must plan for the future. He must decide how much to spend for research, how much to put into reserve for the replacement of worn-out equipment, whether or not to enlarge or to modernize his factory. It is plain that planning by business firms is more complex than planning by individual consumers.

Industry-wide planning. It will by now be obvious to the reader that a prime feature of plans of different types is the reconciliation of a wide variety of decisions, so that they do not conflict with each other but instead form a consistent whole. Clearly the task of making plans can only be performed effectively by some individual or small group in possession of all needed information as to the objective on the one hand and the means to attain it on the other. This condition is fulfilled in the case of the individual consumer and of the business firm. But in the case of most industries, consisting of numerous firms, such a centralized planning group is conspicuously lacking. In an economy such as that of the United States the price and output of bituminous coal or of copper wire are traditionally settled, not through the operation of any industry-wide plan, but through the interaction of buyers and sellers in the market.

Indeed during most of our history industry-wide planning has been deliberately discouraged in the belief that it would lead to the restriction of output and the raising of prices. This policy was reversed temporarily during the NRA experiment described in Chapter 12. In recent years agriculture has afforded another example of industry-wide planning; how acreages and production quotas are set each season by the Department of Agriculture is shown in Chapter 16. But in general the planning unit in American industry has traditionally been the firm rather than the industry.

Urban planning. Most large cities have a planning commission or other body charged with supervising highway development, administering zoning laws, and similar functions. Inasmuch as such bodies often have only advisory powers, or can exert only negative control (e.g., by prohibiting certain types of development), their ability to carry out their plans is questionable and their actual planning often piecemeal. Despite the largely unplanned character of urban development in actual practice, the requirements of effective urban planning afford a good illustration of the principles under discussion. That is, the location of different types of facilities (highways, bridges, public transportation, factories, office buildings, stores) should be so planned that the utility of each is enhanced rather than diminished by the location of the others. Secondly, the importance of foresight is obvious here also. Facilities and zones within the city should be laid out to allow for as much population growth as is likely to occur between now and the time when the facilities are ripe for replacement or the zones for modification. Other changes, such as may occur in traffic or in industrial activity, should so far as possible be anticipated.

Regional planning. Usually city planning concerns an area described by the city limits; the geographical scope of planning by federal or state

governments coincides with their respective jurisdictions. But sometimes a special planning agency has to be created. Two examples may be cited. The Tennessee Valley Authority was established by Congress to plan the development of water power and navigation facilities, and to arrange for flood control, in a region which includes parts of seven states. As a planning agency, TVA is notably superior to the city planning commissions described above, for it owns and administers the resources, the location and character of which it plans. So far as engineering conditions allow, it can be sure that its plans will be realized in practice. In this respect its planning resembles that of a business firm (which plans what it administers) rather than of an agency of government (which must often plan by persuasion or at best by prohibition). The second example is the Port of New York Authority, created by compact between the states of New York and New Jersey. Its function is of course the maintenance of the harbor and docks, and of New York City's airports. As a planning agency it occupies an intermediate position, for it owns some but not all of the facilities for which it must plan.

Planning by the United States Treasury. The planning activities of the Treasury are of two kinds. In the first place, as with state and local governments, the Secretary must plan a balance between receipts and expenditures. He submits for the approval of Congress a list of recommended appropriations to finance the activities of government, and he submits a schedule of taxes intended to furnish the government with revenue. He may further plan to repay debt, or to borrow afresh, according as a surplus or a deficit is anticipated. Obviously, co-ordination of revenue, expenditure, borrowing, and debt repayment are necessary. Obviously, too, future needs must be anticipated, as when construction programs of a continuing character (e.g., TVA) are begun. Except for the fact that Congress may intervene, this type of Treasury planning resembles that of a business firm in that the execution of the plan is in the hands of the planning agency.

The receipts and disbursements of the Treasury are so large in relation to the gross national product (see Chapter 7) and the federal debt constitutes such an important fraction of banking assets (Chapter 21) that federal fiscal policies cannot avoid influencing the level of business activity, and the economic fortunes of different industries and sections of the country. To take a crude illustration, a decision to spend more than anticipated tax revenues and to finance the difference by borrowing from the commercial banks is likely to expand the money supply, raise prices, and increase business activity, perhaps to an unhealthy degree.

It is obvious that the Treasury cannot afford to neglect effects of this kind resulting from its policies. Accordingly a second type of planning is in question here—the planning of fiscal policy in relation to its effects upon the money supply and national income. Since these effects are due to the *size* of the federal budget, such planning (unlike that of the first type discussed in the preceding paragraph) is possible only for the United States Treasury and not for state and local governments. We are dealing here, moreover, with a case of indirect planning, for possible variations in business activity are obviously not administered directly by the planners in the Treasury Department, but result (if at all) from reactions of thousands of businessmen to stimuli caused by Treasury policy.

There have been and still are two sharply opposed views concerning this type of Treasury planning. One is that the Treasury should plan its fiscal policies so as to interfere as little as possible with business conditions. Roughly this means the policy of the balanced budget. The other view is that fiscal policy should be used to stabilize business activity at a level which if possible secures full employment. Something further will be said about this controversy in Chapter 31.

Other types of peacetime planning. Of course almost any measure of economic policy may have planning aspects or may call for planning in its administration. But the more important types of planning have now been discussed. A few special cases remain to be noted. Certain attempts have been made to plan the use of natural resources, and especially to conserve them. As an example of indirect planning in this field may be mentioned the prohibition of wasteful practices, and the proration of output, in the petroleum industry. The states concerned do not themselves own any oil wells, but attempt to induce the operators, through a system of prohibitions and incentives, to conform to the plan. Direct planning of a limited kind is exemplified by federal and state operation of parks and forests for recreation and wildlife preservation.

PLANNING IN WARTIME

The planning of the use of resources undertaken by the federal government during World War II was administered principally through three agencies: the War Production Board, the War Manpower Commission, and the Office of Price Administration. As already explained, the object of the plan was the diversion of resources to war production, together with the equitable distribution among the public of the reduced supply of consumers' goods. Controls were indirect. The execution of the plan, that is

to say, was not administered by the planning agency, but depended upon a system of prohibitions and incentives. Certain materials, for example, might not legally be used for purposes other than war production; workers found they could earn more in war factories because their peacetime employers were not allowed to raise their wages. Wartime planning therefore resembles other types of indirect planning mentioned above, such as urban development plans or the operation of Treasury fiscal policy.

The planning of the war effort by the federal government differs from peacetime plans in two important respects. In the first place it was developed in a great hurry to meet an emergency and its horizon was relatively short-range—a year or two at most. The speed with which the entire system of controls had to be organized was of course a disadvantage and led to much improvisation, but the nature of the emergency which produced it increased people's willingness to co-operate. The sense of urgency and the short-range outlook—the feeling that the thing must be done now or not at all—made planning easier because of the diminished need to balance the present against the future. The present was almost always the more important, for in the future the war might be over; then the need for the weapon which took time to produce would have disappeared.

In the second place wartime planning differed from other types in that it represented comprehensive economic planning on a national basis. The War Production Board was not interested in controlling the use to which a single industry was put, or the use of an isolated type of resource; it was interested in determining the minimum with which the civilian economy could get by, and then channeling *all* other resources (labor, equipment, power, and materials) into war production. It had, further, to make clear decisions between competing uses within the war program, and to allocate resources among the Army, Navy, Air Force, and lend-lease. This is what is meant by the statement that wartime economic planning was comprehensive.

WHAT DO WE MEAN BY "PLANNING"?

The preceding pages have described the principal types of planning employed in the conduct of economic affairs in the United States. It now seems worth while to inquire what they have in common, and thereby to refine our notions as to just what we mean when we use the word "planning."

Rational adaptation of means to ends. Close examination reveals that any kind of plan is invariably concerned with means—with organizing means to the attainment of some stated end. An individual consumer makes a plan

in order to finance some large expenditure, or merely to prevent himself from running out of cash before the end of the month. A city may plan improvements to solve a traffic problem, to expand recreation facilities, or merely to flatter municipal pride. The purpose of a wartime plan is usually to maximize the output of munitions. Being always concerned with a means to an end, economic planning deals first and foremost with the use of resources. To an individual, resources are represented by his income. The resources whose use a city plans may be space, or light and air, or simply tax revenues. A wartime plan deals for the most part with skilled labor, industrial capacity, and strategic materials. Natural resources whose use may be planned in a conservation program include minerals, soil, timber, and wildlife. The resources concerned are always scarce, or there would be no need to plan their use.

Co-ordination, synchronization, integration. There are many simple situations in which the best use of resources can be obtained without resorting to anything so elaborate as a plan. Planning only becomes necessary when the problem is complicated by the need for some further element, e.g., co-ordination. Sometimes the means have to be co-ordinated to reach a given end. One obvious example is the need, in operating an automobile assembly line, to secure a continuous and synchronized flow of subassemblies and components in order that final assembly shall proceed smoothly. Obviously the necessary co-ordination of deliveries from outside suppliers requires planning by the firm which operates the assembly line. On a larger scale the co-ordination by the War Production Board of the use of plant and materials in order to secure a continuous flow of munitions may be regarded as the principal reason for centralized economic planning during World War II. Thus co-ordination and synchronization can only be achieved if the various parts of the plan are properly integrated with each other, i.e., fit together to make a unified and consistent program of procedure.

We have spoken so far of the need to co-ordinate the use of widely varied resources in attaining a given objective. But planning may be just as necessary in co-ordinating the use of a single resource which must serve several ends. We need only think of a railroad timetable. The capacity of the tracks is limited, and the use made of them by various types of traffic must be co-ordinated in a plan, or chaos will result. To cite another example, experience in the Tennessee Valley has shown that a single masonry dam can provide power, navigation, and flood control much more economically than would a series of separate dams specialized to each of these purposes. But to achieve all three purposes simultaneously elaborate planning is neces-

sary, both in designing the dam and in operating it after completion. Otherwise the attainment of one objective will interfere with that of another.

Anticipation of the future. In addition to co-ordination either of means or of ends, most planning will be found to involve a further element, i.e., foresight. This element enters whenever resources are used over an appreciable period of time. Indeed, the very word "planning" is sometimes used merely to mean that deliberate attention will be given to the claims of the future in relation to those of the present. Certainly an important reason why individuals plan their budgets is to prevent future needs from going unsatisfied. Here planning is a means of overcoming the myopia with which we all tend to view the future. Not only do future needs often seem less intense than present ones; frequently they are not exactly known. For our foresight is imperfect, and so sound planning in relation to the future makes allowance for the "rainy day." Businessmen, too, must plan ahead. The railroad must sooner or later replace its equipment, the farmer restore the fertility of his soil. Indeed foresight is a particularly important element in planning for the conservation of natural resources. If we refrain from wasting oil, encourage the saving of scrap metal, or take steps to replant forests that have been depleted, we do so only because we think these resources may be needed in the future.

To summarize, planning is something which is forced upon individual, business, or public management by the need for economical administration of resources. The advantages derived from planning, and the complexity of the plan, in any given situation depend upon how varied are the resources whose use must be planned, and how scattered are the objectives which the plan is to serve.

PLANNING BY GOVERNMENT

Planning by individuals and by business firms we are inclined to take very much for granted, if indeed we give any thought to the question as to whether or not such planning is undertaken. Planning by government, on the other hand, commonly gives rise to controversy and—when the desirability of its extension is propounded—to acrimonious debate. Of course few people object to planning by governmental departments within their own immediate administrative spheres. The annual submission to Congress of the federal budget by the Secretary of the Treasury, of plans for soil conservation by the Secretary of Agriculture, and of a naval construction program by the Secretary of the Navy are recognized parts of the machinery of government. Yet the moment its reference is broadened from

the narrow departmental concerns of a single agency to the American economy as a whole, planning by government becomes a highly controversial issue.

As hinted above, this contrast represents the difference between *comprehensive* and *piecemeal* planning. For it is obvious that if the Secretary of the Interior is given a job to do—to reclaim a river valley, let us say—he must be allowed to plan the job. Nobody objects to piecemeal planning. But suggest that some government agency—the Treasury Department or the Federal Reserve Board, for instance—be charged with the task of maintaining full employment, and the air is loud with discord. You will be told that it is not within the power of a government agency to influence the volume of employment, that the Treasury will be bankrupted, that the resulting inflation will wipe out the people's savings, or that the proposal is contrary to the Constitution. (The idea of full employment and some of the problems involved in attaining it will be discussed in Chapter 31; the real merits or demerits of the proposal are not relevant in the present context.) A program to secure full employment would clearly be an example of comprehensive planning. It would affect large numbers of people, some favorably, others perhaps adversely. Its very novelty may frighten some. Hence the strong feelings it is likely to arouse.

In the field of comprehensive economic planning by government it is appropriate to discuss proposals to plan for some such broad objective as full employment, or the control of business cycles, or the abolition of poverty, because these are the general types of proposals most commonly advanced by those who call themselves planners. Yet the only comprehensive planning of which we have had actual experience in this country (apart from a brief experience during World War I and the equivocal NRA experiment) was that practiced by the War Production Board and other agencies during 1941-45—emergency planning, not to achieve a social objective, but to win a war.

The unpopularity of wartime controls, already described, is sufficient evidence of how much the average individual dislikes to be made part of a comprehensive plan. Must we conclude that in an economy such as our own, with a political system in which government must listen to the voters, comprehensive economic planning is ruled out (except in times of national emergency) because too many toes are stepped on? Before discussing this question we shall do well to examine briefly the planning practiced in an entirely different sort of economy with quite other political conditions. To the rest of the world the Russian five-year plans, the latest inaugurated in 1946, have been both an inspiration and a reproach. They have furnished

an inspiration because of the magic so many people feel in the word "planning"; and they have constituted a reproach because of our seeming inability to appropriate to ourselves even a little of that magic.

COMPREHENSIVE ECONOMIC PLANNING IN THE SOVIET UNION

The State Planning Commission plans the Russian economy with quite extraordinary thoroughness. Each industry and each individual plant is told how much it is expected to produce, how much raw material it will be allowed, and how many workers it may employ. The whole plan is so integrated that—if targets are met—each producing unit will receive from some other unit exactly the supplies it needs. Such success requires perfect co-ordination, synchronization, integration of all parts of the economy to each other. Obviously a plan of this sort has to be worked out in very great detail. The continuing series of Russian five-year plans resembles in comprehensiveness, but certainly exceeds in point of detail, the emergency wartime planning of our own War Production Board. Yet the differences between Russian peacetime planning and our own wartime planning are quite as marked as the similarities.

Since 1917, with unimportant exceptions, the Russian state has owned, and therefore has been forced to administer, the whole of Russian industry—manufacturing, mining, transportation, public utilities, wholesale and retail enterprises, and much urban real estate. In some cases it was possible to delegate ownership and operation of enterprises to municipalities, co-operatives, or labor unions; but for the most part factories, mines, and railroads are administered more or less directly by the state. The problem of managing Russian industry is therefore like the problem of managing a single gigantic firm—a firm even bigger than General Motors or United States Steel. And the Russians, in managing their industry, undoubtedly felt the same need for planning that the average firm feels in an economy such as our own. In other words, Russian centralized planning was not invented suddenly to meet an emergency but grew out of the need to administer state-owned industry.

The fact that the Russian state plans what it administers offers an important advantage. Planning can be direct instead of indirect. The Planning Commission, that is to say, can give orders to plant managers who are its subordinates. It does not have to cajole or persuade, to invent incentives or police a set of prohibitions. It might indeed be thought that these facts would guarantee the execution of the plan, but such is not the case. Too often, as the Russians themselves have complained, targets have not been

met, either because of bad planning in the first place, because of inefficient or dishonest managers, or possibly as a result of "sabotage." Yet the fact that you can give orders to those whose actions you are planning certainly facilitates things. In the United States, even during World War II, this was possible only to a small extent; most planning had to be indirect. Workers had to be tempted into war plants by high wages; manufacturers had to be tempted to produce munitions by giving them favorable contracts and by denying them materials for civilian production.

The other main difference between our own wartime planning and the Russian five-year plan of course relates to objectives. Our own planning was improvised to meet a specific emergency—the need for rapid conversion of resources to wartime uses. The obstacles it met suggest that it could never have been carried out except in the light of that emergency. By contrast the comprehensive planning of the Russian economy was not undertaken with any special objective, emergency or otherwise, in mind. As has been explained, the need for economic planning was a by-product of the state ownership which followed the revolution.

Later, as the Soviets became convinced that the rapid industrialization of the country was necessary, both for a rise in the standard of living and for an increase in the country's military potential, great advantages were seen in making plans five years at a time. The Russian government deliberately diverted large resources to the construction and equipment-producing industries, and the Russian economy probably devoted a much larger fraction of its income to accumulation than would have been possible had decisions to save rested with individual consumers.

WHAT CAN WE LEARN FROM SOVIET PLANNING?

Just as centralized planning of production is the natural consequence of state-owned enterprise and is indeed necessary to the efficiency of such enterprise, so comprehensive planning of the entire economy is seldom encountered among nations where private enterprise prevails. In the United States (at least in time of peace) the mutual adjustment of supply and demand, the allocation of resources, and the decision as to what shall be produced, all occur through the everyday operation of the market. The Russians have to plan; it is the only way they can operate their economic system. We in this country have not needed to plan comprehensively, and indeed have never seriously thought of doing so except when faced with some emergency.

Secondly, comprehensive planning of their economy is much easier for the Russians than planning of our economy is for us. For we have a different kind of economy. Here planning must be indirect. The planners, that is to say, cannot order so-and-so to produce such-and-such. They have to attack the problem indirectly by making regulations—and regulations can be extremely irksome, especially in peacetime. Indeed, we may assume as a matter of practical politics and administrative feasibility that *comprehensive* economic planning is unattainable in this country without the adoption of state socialism, i.e., state ownership and administration of some large proportion of our productive resources.

It cannot properly be assumed that, because the Russians regard overall planning so highly, it would yield equal benefits if we adopted it. In fact, the Russians, having no free-market mechanism, *must* allocate resources centrally. We, on the other hand, having a free-market system, can allow the market to perform the task on our behalf. Yet the issue is by no means open and shut. The market works badly on occasion—for instance, when monopolists get control. Planning can lead to inefficiencies of great magnitude, as the Russians have found out. But probably in the last resort most Americans would reject as a permanent and controlling idea, the very great concentration of power in the hands of a single government agency which this kind of planning requires. In principle such power might be subject to democratic control (as it is not in the Soviet Union); yet the surest way to prevent the abuse of power is to keep it diffused, as it is diffused under the anonymous operation of the market system.

There are even stronger reasons for questioning whether the introduction of comprehensive economic planning in the United States would be worth the cost. These can be seen by asking ourselves precisely which social objectives we would hope to gain by its introduction. For the Russians planning is a necessary concomitant of an economic system in which the state owns the means of production, in which everybody works for a wage or salary and no one receives income from property, in which—in a word—private profit does not exist. The inauguration of such a system was their main objective. The planning came afterward, and was found very useful for achieving the rapid industrialization of the country. Russian priorities in the matter of social objectives were therefore wholly different from any which would appeal to many people in the United States today. What then are our social objectives today, and how far could they be advanced by centralized planning? In discussing this question, our model of centralized planning will necessarily be the only fully developed model that exists today, that of the Soviet Union.

CAN CENTRALIZED PLANNING SERVE OUR OBJECTIVES?

Numerous objectives of economic planning might be listed. Some of these would be general or comprehensive in character, such as the abolition of poverty (in some defined sense), the maintenance of full employment, or the institution of a thirty-hour week. A second kind of possible objective would be more limited in scope, and would affect only certain areas or industries: the duplication of the TVA in other river basins, the construction of a nation-wide system of express highways, or the elimination of slum areas from our larger cities.

We have seen that this second kind of objective requires planning for its attainment—extensive planning—but planning which, in the United States, occurs within the scope of the market system. Comprehensive centralized economic planning is not involved in such proposals, and planning as it is understood in the Soviet Union offers no guide to their execution. If Soviet experience with a planned economy has anything to teach us, it should be in connection with planning for some such general objective as, say, the maintenance of full employment. Let us look at the matter a little more closely, and see how the Soviets plan a job for every Russian citizen.

The industrial labor force of the USSR (excluding farm workers) was about 31,500,000 in 1947, and is expected to rise to 33,500,000 by 1950, when the current five-year plan comes to an end. On the basis of past experience, and allowing for probable increases of productivity in the future, the Planning Commission can calculate that these workers are capable of producing so many tons of coal, so many tons of steel, and so forth. Moreover, they are capable of converting these raw materials into so many trucks and so many tractors, so many razor blades and so many hydroelectric generators. Obviously a policy decision has to be taken as to the relative importance of different final products, because more of one thing means less of something else. In the current, as in previous five-year plans, large amounts of output will take the form of capital goods, including new building construction. Principal stress is laid upon the industrial rehabilitation of the areas of western Russia which were invaded by the Germans, and upon the further industrialization of the Urals.

Of course the entire plan must hang together. It is not enough that the output required of, say, a steel plant should be feasible in terms of its own manpower and equipment. Smooth working of the plan introduces a great many "musts": iron ore producers must be able to deliver on time, sufficient coal and electric power must be available, the transportation sys-

tem must have adequate capacity, and fabricators must be prepared to utilize the steel once it has been manufactured.

When all these necessities have been met, when every piece of the plan has been dovetailed with every other, and when all the necessary calculations have been made, the finished plan is approved and published. Doubtless the best efforts of the entire labor force will be required; by 1950 coal output will be 51 per cent above prewar, steel output 35 per cent, electric power output 70 per cent, and so on. To judge from the results of previous five-year plans, some of the targets will be surpassed, others will fail of achievement. Not every Russian will be provided with a job of the kind he prefers, or one which uses his highest skill. Many workers may have to go long distances to find employment, and new plants will sometimes be finished before housing facilities are available for the workers. Russians may still have many subjects for complaint, but large-scale unemployment is not likely to be one of them.

The reason why the Russians will give practical effect to the plan is plain. Russian industry is controlled and operated by the same authorities as do the planning. Provided that the plan is within the physical capacity of the Russian economy, the government can order the plan to be executed, and the government will—in the main—be obeyed. Often, of course, in dealing with individual workers, the government will prefer to temper command with persuasion; the scope for incentive systems of wage payment is still further increased in the present plan. Yet the managers of mines and factories, of railroads and construction enterprises, take their orders from the very people who drew up the plan.

Let us see what would happen if centralized economic planning were adopted in the United States with a view to achieving the object proposed, i.e., continued full employment over the years. The labor force of the United States (including agricultural workers) is roughly sixty million persons. As this is written (late in 1948) very nearly all of these workers are in jobs, and we know fairly accurately what they are producing. Yet we would not expect or wish every one of them to be engaged five years hence in exactly the same ways as they are at present. In some occupations, particularly in manufacturing, the gradual increase of productivity will release workers; in other lines, for instance the hotel and tourist industry, more workers are likely to be needed than are currently employed. If we leave the American economy to its own devices during the next five years, a redistribution of labor will occur; but, on the other hand, it is not certain that the total number of jobs available—the demand for labor—will continuously be sufficient to employ all sixty million persons.

Suppose, therefore, that we construct a five-year plan for the United States which calls for the employment of just sixty million persons in producing specified amounts of all the various things industry turns out. This is by no means an impossible task. Already several enterprising statisticians have estimated in broad outline the future productive capacity of the American economy. The National Planning Association, for instance, predicts that our potential output in the early 1950's will be around 45 per cent greater than actual output in 1941. Indeed, the Association has gone further than this, and has indicated the kind of redistribution of the labor force which we may expect, and even roughly the kinds of goods that will be needed in larger quantities, and the kinds that will not. There is no doubt that, given some general directives and a suitable statistical staff, a governmental department *could* draw up a plan for the evolution of the American economy over the next five or ten years—a plan which would employ everybody, would make suitable provision for capital replacement and expansion, would be internally consistent, and would, moreover, contribute to many desirable social objectives (e.g., slum clearance, highway development, and so forth).

CENTRALIZED PLANNING AND PRIVATE ENTERPRISE

What prospect would there be of putting such a plan into practice? In the United States, decisions to hire workers, to purchase materials, to produce this commodity rather than that one, are made by thousands of individual businessmen, none of whom would have a clear motive for adapting their actions to fit into the plan, especially if (as would sometimes happen) the plan ran counter to their interests. In the Soviet system the opposite number of the American businessman—the plant manager—is a paid agent of the state; he follows the plan or he is fired. The contrast is complete.

In the United States industry is owned and operated by private individuals and corporations, not by government. Therefore, centralized planning cannot be applied directly. Conformity to the plan can be obtained only by indirect means—by price-fixing, rationing, the allocation of materials, the prohibition of certain types of activity. That is precisely how the wartime economic plan was put into effect. But it is a very inefficient method. Regulations are difficult to enforce. Despite the creation of a host of new crimes, conformity to the plan cannot always be guaranteed. It is in any case difficult to imagine circumstances in peacetime under which the

public would submit even to the comparatively mild curbs upon its economic activities which were imposed during World War II.

Some further consequences of the abandonment of the market as the mechanism for allocating resources to different uses should be noted. Centralized planning necessarily involves partial renunciation of the sovereignty of the consumer. To some extent at least the planning agency would find that it had to underwrite losses of businessmen in return for their allegiance to the plan. Under present conditions in the United States the adaptation of production to changes in consumers' demand, and the correction of erroneous anticipations concerning demand, are forced by the threat of bankruptcy. Under the conditions envisaged, such changes would require a revision of the plan itself. Obviously adaptation to the wants of consumers would occur much more slowly than at present. Similar considerations apply to the case of technological advances. The plan itself would no doubt allow for anticipated increases of productivity. Yet technological progress often occurs unexpectedly. Because of the need to revise the plan, it is unlikely that inventions would be adopted as rapidly as under our present system.

It should not be supposed that the Russians are unaware of these disadvantages of centralized planning, as opposed to dependence upon the market system. The point is that, in fulfillment of a political principle, the Russians turned all industry over to the state. They abolished the mechanism of the market. Both the need for a comprehensive economic plan, and the possibility of putting such a plan into operation, were a natural consequence. The economic system of the United States, as it has developed since the continent was first settled, is extremely ill-adapted to comprehensive planning. Moreover, a large part of the functions discharged by centralized planning in the Soviet Union—the allocation of resources to different uses and the co-ordination of the flow of materials and half-finished products—is cared for in the United States without any special supervision through the quasi-automatic operation of the market.

To summarize, it may be said that in the United States comprehensive economic planning is both less necessary (at least in peacetime) and far more difficult to carry out than in the Soviet Union. Yet the question with which we started has not been fully answered. May there not exist broad social objectives, the attainment of which is clearly desired by the community, and toward which progress is difficult or impossible without centralized planning? A full answer to this question would require a careful analysis of the routes by which each such objective might be reached, with and without economic planning. There is space here only to sketch the elements of such an answer.

The form of the above question is prompted by the considerations already outlined: that the substitution of comprehensive government planning for market processes is not a good thing for its own sake, that such planning is not called for (as in Russia) by administrative necessity, and that in an economy such as ours such planning is extremely expensive (in terms of bureaucratic control) and not very efficient (since control is indirect). What then is the minimum amount of planning called for by various possible and desirable social objectives? This question naturally leads to another: which objectives are worth the price involved in planning for their achievement?

THE OBJECTIVE OF FULL EMPLOYMENT

Let us begin with the example cited in the above discussion—the question of full employment. It is obvious that, subject to the existence of sufficient workbenches and tools, a comprehensive plan on the Russian model can furnish jobs for the entire labor force. Such a plan may not be able to furnish the kind of job preferred by every worker in the locality which he chooses; yet some kind of employment it can certainly offer him. Is there any way in which the same result can be assured through the ordinary processes of the market as those processes have developed in our own economy?

The market system performs two functions: it creates jobs and allocates resources in response to money demands by ultimate consumers. And it also determines, through the flow of incomes, how large the aggregate money demand will be. It settles, that is to say, how many jobs will be created and how large an amount of resources other than labor will be used. In more precise language, the mechanism of the market simultaneously determines the distribution of resources among industries, and also the level of business activity as a whole. If jobs are not available for all who want them, then the market system is failing to discharge an important function adequately. A central planning agency may achieve full employment in its more cumbersome fashion, by setting the number of jobs there should be in each industry and occupation, and deciding as a consequence the total number of jobs. But a very large number of possible errors is implicit in planning in such detail: the planning agency would need to know in advance how much of each kind of commodity and service would be demanded at prices which would be appropriate in relation to each other.

Why should we not reverse the method of such a planning agency, decide how many jobs in the aggregate we can fill (or, ultimately, need to

fill) and then see to it that the level of business activity is high enough to employ that number of workers? If this could be done, it would involve the planning of aggregate money demand, and nothing else. The distribution of demand among different industries, and the location and character of individual jobs, would in that case be left to determination by the market system as before.

Can we decide the total number of jobs to be aimed at without first planning how many workers shall produce steel, how many operate railroads, how many become doctors or dentists? We can do so provided we can influence total money demand for output—provided, that is, we can fix gross national product at an appropriate level. For gross national product (whose composition was described in Chapter 7) is another name for the total amount of goods and services produced by everybody who is employed. It is illuminating at this point merely to indicate briefly the large number of ways in which government policy inevitably impinges upon the demand for goods and services, and so influences the size of gross national product or the level of business activity.

First, government itself buys much of the product in the form of services of those who work for it directly. Second, public works construction and other government expenditures indirectly employ large numbers of persons. Third, subsidies and activities of government lending agencies influence private capital expenditures in fields as far apart as agriculture and forestry, merchant shipping, aircraft development, and atomic research. Fourth, Treasury and Federal Reserve policies affect both the willingness of the banks to extend short-term loans and the interest rates at which long-term funds can be obtained, and therefore influence private capital expenditures. Fifth, policies of the same agencies influence consumers' expenditures by altering the attractiveness of saving and by varying the availability of installment credit. Whether in fact these various channels whereby government can influence total spending are adequate for the realization of a policy of full employment is a question we shall not attempt to answer here. It forms much of the subject matter of Chapter 31.

Could a program designed to achieve full employment, using the kind of technique indicated above, be described as "planning"? Probably we would wish so to describe it, for it embodies most of the characteristics of planning described earlier in this chapter. Certainly such a program would involve foresight and anticipation; for success it would also require extensive co-ordination of the policies of different government departments. Yet, if we dignify a full employment policy of this sort as a form of "economic planning" we should also realize how far removed such planning is, both

in scope and in method, from a Russian five-year plan. Indeed, in planning for full employment along the lines indicated, little if anything is to be learned from Russian experience or from our own wartime planning.

OTHER DESIRABLE ENDS

To what extent can other possible social objectives be attained without comprehensive planning in the Russian sense? The more general the objective, the more difficult would the task appear. Yet few if any ends would seem to be served well by planning which concerns itself with the detailed allocation of resources and supersedes the market system. A few examples will be chosen.

The elimination of poverty. Perhaps the broadest objective likely to commend itself is the abolition of poverty. However poverty may be defined, its elimination must involve larger incomes for those currently in the lowest income brackets. This implies either a larger and more stable national income, or a national income more evenly distributed, or both. So far as a larger and more stable national income is concerned, much that has been said above is relevant. The successful application of a full employment policy would eliminate income losses caused by business depression, and would push average national income as high, over a period of years, as existing techniques of production allow. Beyond that the size of the melon can be increased only by further improvement in production methods. If we wish to plan for such improvements, we should make appropriations for research.

Poverty could also be reduced, although not perhaps eliminated, through more equal distribution of the existing national income. The most convenient way to reduce the inequality of incomes is through progressive taxation. Yet we should not forget that the abolition of unemployment would in the recent past have offered more scope for reducing poverty than would even the most thoroughgoing redistribution of income. Therefore, we should guard against the risk of carrying progressive taxation so far that it might interfere with the full utilization of resources. Other ways to raise the real incomes of poor people would be through reduction of the tariff, elimination of sales taxes, more comprehensive provisions for social security, and larger appropriations for low-cost housing. This brief discussion shows that possible avenues of attack upon the problem of poverty are numerous, that they involve large questions of policy and perhaps of planning, but that centralized economic planning as a substitute for the mechanism of the market offers little, if any, advantage.

Reduction of working hours. Another much-discussed objective of public policy is a shorter work week. As productivity increases, more leisure and larger incomes may be thought of as rival claimants. The same policies which yield a larger national income, could be made to yield more leisure instead. To elevate the shorter work week into an object of policy, apart altogether from a larger national income, is to argue that the balance has been tilted in the wrong direction and that workers would prefer—right now—to have more leisure and less income. It does not seem likely that union officials have so far failed to reflect the views of their constituents as to allow this to happen. We may conclude that as social objectives a shorter work week and a larger national income are the same thing, or at least are to be attained by the same route.

More specific objectives that could be mentioned are of course numerous. Better housing, improved highways, more parks and playgrounds, expanded hospital facilities, greater safeguards to public health—piecemeal planning for such objectives is obviously compatible with the market mechanism, and need not be further described.

The drift of this discussion suggests that centralized economic planning which supersedes the market in the allocation of resources would not only be very difficult to carry through in peacetime, but would also be of slight assistance in attaining the more commonly proposed objectives of public policy. The centralized planning of the American economy during World War II had for its objective the emergency diversion of resources on a vast scale. Planning partly took the place of the market mechanism in order to effect the transformation within the shortest possible time. In peacetime the problems encountered are of a different sort, and wartime experience offers little guidance.

PLANNING VS. POLICY

If planning cannot usefully supersede the market mechanism in allocating resources among different uses, must it be confined to piecemeal objectives—for instance, the elaboration of a flood control program in the Mississippi Valley? Should we be satisfied with the assurance that each individual project is well planned? Or should we demand of our government that it integrate plans for individual projects into one master plan?

Insofar as projects involve spending by the federal government, it is clear that the plans must be integrated. For the budgeting of revenues and expenditures, discussed earlier in this chapter, obviously requires that ex-

penditures be related to each other and to future budgetary burdens. Indeed we may go further than this and say that maximum benefits from many types of expenditure can be obtained only if federal, state, and local outlays are planned together.

Does the need for integrated planning go beyond the principle that expenditures on different projects should be related to each other? In the example of planning for full employment, given above, no fewer than five separate routes were listed through which the policy of some federal agency might influence the volume of employment and the level of the gross national product. From the viewpoint of employment planning, the large number of points where federal policy impinges upon the employment situation may perhaps be considered an advantage; the armory may be said to contain more than one weapon. But the picture can also be viewed from a different angle. Suppose instead that we do not have a plan for regulating the volume of employment, but decide we wish to leave the level of business activity to the mechanism of the market. If we think that the federal government, simply by forgetting about the problem, can avoid influencing the level of employment, we are greatly mistaken. For the five routes are still open, even if their use goes unco-ordinated. The Civil Service Commission is hiring workers; the Public Works Administration is signing contracts for construction; the Export-Import Bank is financing the export of machinery; the Treasury and the Federal Reserve Board, in the course of their day-to-day operations, cannot help but influence the credit situation, and therefore the level of private investment expenditures.

Of course the mere fact that the government has policies which influence prices, production, and employment does not necessarily mean that these policies are planned. When the Civil Service Commission hires workers, its first thought is for the administrative needs of government agencies, not for the effect of its actions upon the labor market. When the Public Works Administration signs a contract for a highway project, it thinks of the need for the new facility; it does not concern itself with the question whether the funds can be obtained without causing inflationary pressures. The business of the Export-Import Bank is to make it easier for foreigners to pay for American goods; it has no specific responsibility to view our international transactions as a whole, or to consider their effect upon business stability. Meanwhile the Treasury scans every proposal for its effect upon tax revenues or upon the cost of servicing the public debt; but it gives little thought to the effect of its policies upon the volume of credit or the price at which corporate bonds can be floated.

THE NEED FOR CO-ORDINATED POLICIES

It is scarcely surprising that a demand should have arisen for the co-ordination of government policies—federal, state, and local—as they affect the economy at large, with special reference to the possibility of stabilizing the level of business activity and the volume of employment. Here, surely, is an opportunity for economic planning. This would not be centralized planning of production in individual plants and industries as in Soviet Russia. Resources would still be allocated, as they ordinarily have been in this country, through the mechanism of the market. But the impact of government upon the market would be planned with a view to influencing intelligently the level of economic activity. The policies of different agencies and units of government would be so co-ordinated that their effects would cease to cancel, and begin to reinforce, each other.

This ideal has not yet been realized. The reason is that until recently we failed to notice the powerful but unintentional effects of governmental policies upon the life of the economy at large. We did not realize the need for co-ordination. To some extent, too, the establishment of the Federal Reserve System contributed to this lack of awareness. For long it was thought by many, especially during the 1920's, that the control of credit—now centralized in the Federal Reserve Board—furnished the key to the maintenance of economic stability. Others claimed that power lay with the Treasury and the Reserve System acting in concert—although the two agencies have more than once followed plainly contradictory policies. We shall see in Chapter 31 that the Council of Economic Advisers, first appointed in 1946, may perhaps become an agency for co-ordinating government policies in the economic field.

It will be apparent to the reader that in economic matters planning and policy are closely related, yet planning is something more than policy. Certainly planning can become a strait jacket, a Procrustean program in which all lesser objectives are sacrificed to a single end. Economic planning in the Soviet Union has sometimes assumed this appearance. However, it has been shown at length that the substitution of centralized economic planning on the Russian model for the market mechanism as we know it in the United States would have many and great disadvantages and few if any advantages. Yet in an economy such as our own there is ample scope for indirect planning, not of the allocation of resources but of the level of economic activity as a whole. In the main the planning aspect of public poli-

cies relates to their co-ordination and integration. Since different policies inevitably affect business activity in many different ways, often by devious and unexpected routes, the need for co-ordination is plain.

In this chapter we have been concerned with full employment only as a possible aim for planning. In the next chapter it will become the main topic.

HAPTER THIRTY-ONE

The question of full employment

MPLOYMENT AS A SOCIAL IMPERATIVE

In primitive societies individuals, families, or small groups themselves roduce most of what they consume. Commonly under such circumstances abor is not very productive and the level of living, judged by our own tandards, is low indeed. But there is no "problem of employment" in such n economy. The simple tools, the plow and the ax, are at everyone's lbow; each individual works just so hard and produces just so much as e chooses. If any able-bodied person is without a job, that must be be- ause he prefers leisure, not because he lacks opportunities to work. To be ure, the family or tribe may discover that the idle are sapping the wealth of the industrious; doubtless even primitive communities have their pan- handlers. Yet in a society where nobody is unemployed except from choice, it would be fairly easy to make and enforce a rule that each able-bodied member should be responsible for his own support.

In modern industrial communities the situation is quite different. Prac- tically nobody is self-sufficient. Almost everybody produces for a market. Moreover, most people work for an employer in return for money wages. And the number of jobs available depends upon how many people at the going rates of wages it is profitable for employers to hire.

We saw in Chapter 9 that periods of active trade or even boom condi- tions have alternated during the course of years with periods of depressed business or "hard times." Opportunities for employment have fluctuated correspondingly. In boom periods most workers can find jobs without dif- ficulty, and in some industries there may even be a shortage of labor. In periods of depression, on the other hand, the number of workers seeking work exceeds the supply of jobs. The problem of unemployment is there-

fore intimately connected with that of business-cycle fluctuations. Yet we are not justified in assuming that, if we could "fill up the troughs" disclosed by business-cycle movements, the unemployment problem would be solved. For there is rather clear evidence of the persistence of some degree of unemployment in years of peak business activity such as 1937, and even 1929. It is an ironic commentary upon our civilization that it apparently takes a major war and its aftermath fully to release the productive capabilities of the nation.

To the minds of many citizens, especially if they are old enough to remember at all vividly life in the United States during the early 1930's, fluctuations in employment have seemed to offer a challenge. There has developed a widespread desire that steps might be taken to insure at all times an adequate supply of jobs, a demand for labor sufficient to employ everybody (or almost everybody) who seeks a job at the going rate of wages—in other words, a condition of "full employment." Boom conditions during and for some years after World War II made the problem seem somewhat less urgent than it had formerly appeared, yet it came to be widely agreed that the maintenance of an adequate volume of employment is an appropriate objective in a civilization which values efficiency, justice, and humanitarian ideals. There is not, however, any corresponding agreement as to how this desirable state is to be achieved. Differences of viewpoint arise from differing degrees of willingness to take risks and make sacrifices for the objective named, and—most important—conflicting beliefs as to how the economy operates and as to which among the numerous economic factors are the "basic" or even the "proximate" causes of unemployment.

THE CONCEPT OF FULL EMPLOYMENT

It is generally acknowledged that full employment cannot, under any practical definition, mean a condition in which every person who wants to work and is able to work will have as much as he desires of the kind of work he prefers. Even at the highest attainable level of employment there may be men and women who want to work, but cannot find a job at wages, or with working conditions, they are willing to accept. Such individuals set a higher value upon their services than the community does—they choose not to work at the going rate of wages for the type of labor they have to offer, and their unemployment is therefore voluntary. In addition to ruling out of consideration those who do not choose to work, we have to pay some attention to the question of unfilled jobs. Just as the unemployment of persons who are willing to work at the going wage rate

indicates a deficient demand for labor, so the existence of work vacancies which cannot be filled at current wage levels suggests an excessive or inflated demand for labor.

For the purposes of this discussion, full employment will mean that the total number of work vacancies equals the total number of workers seeking jobs but unable to find them. This definition assumes that the vacancies are not numerous in relation to the total number of jobs, and that they offer the going rate of wages and other working conditions about equal to prevailing standards. It assumes equally that unemployed workers are not numerous in relation to the total number of workers, and that they would accept offers of employment at going wages and with normal working conditions. Why, the reader will ask, do not the unemployed workers immediately fill the vacant jobs? Unfortunately, unfilled jobs and unemployed workers may coexist for many reasons: distance, ignorance, lack of correspondence between skills sought and skills available. Such reasons may separate would-be workers from potential employers. Because of such "frictional unemployment" (see below) full employment has to be defined in this roundabout manner if it is to make sense as a policy objective.

Full employment, so defined, matches joblessness with unfilled jobs, but does not require that every worker have a job equal to the best he ever held. Thus, under the terms of the definition, there could be full employment even though there were workers holding jobs, or willing to accept jobs, less desirable from their viewpoint than other employments for which these same workers are qualified. Thus no net unemployment would exist if, for example, men capable of working as toolmakers are employed as routine machine operators even though the number of toolmakers might happen to be larger than the number of jobs for which workers possessing those skills are currently sought. Moreover, if the toolmakers refuse to work at some less skilled occupation (though qualified to do so) we should have to regard their unemployment as a matter of choice. Excesses above current requirements of men having special skills may occur either (1) because of technological changes or (2) because of mass shifts in kinds of productive activity such as occur on the largest scale when a nation equips itself for war or concludes a war. Such excesses, due to both causes, are likely to be with us for a long time as a result of World War II.

SPECIAL TYPES OF UNEMPLOYMENT

Any classification of the kinds of unemployment is almost certain to be in some degree unsatisfactory; the circumstances in which people seek

jobs and cannot get them do not follow a fixed pattern, and overlappings of categories are inevitable. In the classification used here, types of unemployment are defined according to the conditions that directly give rise to them; such conditions may also be strategic points of attack for appropriate employment policies.

Transitional unemployment. This describes the situation of workers who have left one job in order to accept, or to seek, another. It is a "job turnover" which corresponds for workers to the "labor turnover" experienced by employers. It is a temporary condition for the workers concerned and yet, since there is continuous movement of this kind—stronger as full employment is approached and weaker as employment recedes—it results in a fluctuating but continuous volume of joblessness. To the extent that workers deliberately take a rest between jobs, transitional unemployment is of course voluntary in character, and therefore without interest for this discussion.

Seasonal unemployment. This occurs in those industries in which the volume of work varies with the annual cycle of changes in the weather and changes in fashion, or with seasonal variations in the intensity of business, such, for example, as occur in retail trade just before and just after Christmas. The most direct way of eliminating seasonal unemployment is for the industries concerned to develop out-of-season business, or for industries to complement each other in seasonal activity so that workers seasonally unemployed in one industry can find seasonal employment in another. The distribution of ice in summer and fuel in winter by the same individuals is a familiar example. Again many workers in Northern summer resorts find occupation in Florida during the winter season. In Switzerland and parts of Italy many farm workers regularly find winter jobs in local industries or in household handicrafts. Employers and labor unions, working independently or co-operatively, probably can deal more effectively with these seasonal ups and downs of employment than can public policy, although it is clear that public policy can smooth the way for dealing with them. The use of combines for harvesting and threshing grain, and of the mechanical picker for gathering cotton, which have reduced seasonal employment peaks in agriculture, are examples of action by employers. The clothing trades, long blighted by violent fluctuations of activity over the year, have succeeded through mutual efforts of employers and unions in maintaining much more stable levels of employment.

"Bottleneck" unemployment. This occurs because of a scarcity of some essential service or material, or because of a disturbance at some point in sequential productive operations. For example, soon after Pearl Harbor

there arose a serious scarcity of toolmakers, a group of skilled workers that cannot quickly be enlarged. While the toolmakers were fully employed, entire industries waited impatiently for the "retooling" that would convert them to war purposes, and hundreds of thousands of unemployed workers waited also for the jobs that could not be offered them until the retooling was completed. Thus the effect of the toolmaker bottleneck was to *thwart* employment, in the sense of slowing up the development of work opportunities. In other cases bottlenecks may throw people out of existing jobs, for instance when industrial raw materials are made inaccessible by a war or made scarce by a natural catastrophe such as a drought or an earthquake.

Still other bottlenecks are created when strikes or lockouts in some industries interrupt the flow of goods or services needed for the operation of other industries. Consider, for example, the extensive dislocation which results from an interruption of coal mining or railroad transportation. Much of the unemployment due to bottlenecks would not yield to any kind of employment policy. It is clear, however, that the stockpiling of strategic materials can mitigate it somewhat, and that regular methods for mediating or arbitrating industrial disputes in "basic industries" can prevent some bottlenecks from occurring.

Frictional unemployment. This occurs because workers are not perfectly interchangeable or perfectly mobile, so that, although employers are seeking unsuccessfully to fill jobs, the workers seeking jobs are not of the right kind or in the right place to fill the jobs that are offered. Thus workers are involuntarily idle even though there is an unsatisfied demand for labor ranging up to full employment as defined above. A secondary cause is that neither workers seeking jobs nor employers seeking workers have perfect knowledge of their market. Policies appropriate to this form of idleness would aim at increasing the occupational and geographic mobility of labor and at making knowledge of the labor market more readily available. Frictional unemployment merges into the next category.

Structural unemployment. Whereas frictional unemployment results from the slowness of adaptation to gradual, often unidentifiable changes in the economy, structural unemployment is caused by a well-defined and often far-reaching change in its "structure" or character. Frequently such unemployment involves a net decline in employment opportunities, which is unaccompanied by a corresponding increase of unfilled vacancies. Some of the more important conditions of structural unemployment are considered below.

1. Changes in the demand of consumers for specific goods. Sometimes such changes are a matter of fashion; the disappearance of the powdered

wig must have put many wigmakers out of work. Sometimes they are the consequence of the development of a new invention, as with the decline in the demand for carriages on the advent of the automobile. Of essentially the same kind, though on a vaster scale, are shifts over the years in the urgency of the community's desire to possess what it takes to fight a war. Viewed thus, the industrial mobilization program of 1941-43 and the reconversion program of 1945-47 represent governmental efforts to ease the consequences of, and hasten adaptation to, structural changes in which the economy was first twisted out of shape to satisfy the needs of war and then twisted back again to serve the needs of peace.

2. Changes in the location of industry. Movement of an industry from one locality to another leaves involuntary idleness in its wake. The critical idleness of whole communities of textile workers in New England and the Middle Atlantic states which attended the southward shift of the cotton manufacturing industry comes immediately to mind.

3. Changes in international trade. Shifts in the location of industry are not confined to movements within national boundaries. Changes in the direction of international trade also may lead to structural unemployment. To take one example, the opening of the West and the establishment of the packing industry led to the export of this country's meat products to Europe after 1870. As a result, European stock raisers had to find other employment. On the other hand, by 1900 packers in the United States were losing their European markets to the lower-cost South American livestock industry, and employment opportunities in stock raising and meat packing in the United States began to decline.

4. Changes in technology. Developments of the industrial arts which occur constantly through changes in methods of production, in materials used, and in products turned out cause men to be displaced from their customary work. Frequently the workers so displaced are more seriously affected by the loss of the commercial value of whatever skills they possess than by the immediate loss of their jobs. A striking historical example is the case of the glass blowers who, after the introduction of automatic bottle-making machines, lost the substantial value of their long training and experience and sank to the status of unskilled or semiskilled workers. Similar displacements of highly skilled workers have occurred more recently in the industries that manufacture precision instruments and lenses. It is in those hand operations that call for extraordinary training and experience, with consequent high labor costs, that greatest efforts are made to find more economical methods of production. The necessities of the recent war stimulated a great new growth of labor-saving methods: substitution of spot-

welding for riveting, of extrusion for casting, and use of pressed metal shapes instead of smaller parts assembled by hand, are conspicuous examples

The changes listed here, in so far as they lead to the displacement of a particular group of workers, may lead to frictional unemployment, temporary in character and offset fairly soon by the appearance of fresh openings at other points in the economy. Or these changes may lead, in appearance at least, to a permanent reduction of employment opportunities whose effects are mitigated only through the slow expansion of the economy as a whole. Thus, structural unemployment merges into general unemployment for a persistent failure to reabsorb displaced workers implies a deficiency in the employing power of the economy at large.

GENERAL UNEMPLOYMENT

Structural unemployment merges with general unemployment, and may be of long duration. But involuntary idleness resulting from job turnover, from seasonal fluctuations, from bottlenecks, or from frictions is in each case due to special, rather than to general, conditions in the economy and is essentially temporary in character. The volume of unemployment at any given moment in time which is associated with one or another of these four causes cannot, in a proportional sense, be very large. Unemployment, other than general and structural, has been estimated at from 3 to per cent of all wage and salary earners, or scarcely more than two million persons in the United States today.

Although no record of the number of persons out of work exists for the period prior to 1939, unemployment in 1932 has been estimated at more than ten million and may have reached fifteen million persons. In 1939 about seven million persons were idle. The vast majority of these unemployed persons were involuntarily so, in the sense that they would have been willing to accept a job at the going rate of wages. The number of work vacancies is not known, but it must have been negligible in 1932, and cannot have been large in 1939. We may therefore conclude that in both these years actual employment fell short of full employment by much more than the amount (say two million) which can be accounted for by the four special and temporary causes discussed above. Idleness over and above this amount we may describe as general, including structural, unemployment.

General unemployment is so called, not only because it cannot be readily associated with specific industries or explained by specific happenings but because it is usually distributed rather widely, both occupationally and geographically. It occurs when spending for consumers' goods and spend

ing for capital goods are together insufficient to purchase, at current prices, the output of goods and services commensurate with full employment. Plainly this is the type of unemployment that is reflected in the lamentable record of joblessness of the thirties.

The insufficiency of spending may be due either to a lack of adequate purchasing power in the hands of the consuming and investing public or to an unwillingness on the part of the public to spend for consumption or investment those funds that they have, or—as seems usually to be the case—it may be due to both of these factors acting simultaneously. Let us first see how a lack of adequate purchasing power may come about.

A decline of purchasing power sufficient to bring on *general* unemployment can result from losses of income inflicted on unemployed workers by any of the *special* kinds of unemployment described above. Of course, if the unemployed workers have savings, unemployment benefits, or other resources which will permit them to spend at about their customary rate, or if any decline in their expenditure is offset by increases of expenditure by other members of the community, then special unemployment need not lead through lessened spending to general unemployment.

In any case, fluctuations in consumer spending ordinarily are far less important as a cause of changes in total spending and employment than are fluctuations in spending for investment. That is, the first step leading to deflation usually is a decline of investment, which causes unemployment in the capital-goods industries. But a decline in purchasing power tends to accelerate once unemployment has developed. The decline of incomes associated with the first step leads to reduced consumption, resulting in unemployment in the consumers' goods industries. At this stage the deflation has started to "snowball." Increased deflationary impetus results from the anticipation of further declines of income, employment, and prices by consumers and producers alike, which leads them to retrench more than they otherwise would. The cumulative tendencies inherent in such a recession of business were analyzed in Chapter 9.

EFFECTS OF INVESTMENT ON INCOME AND EMPLOYMENT

For the purposes of this discussion, it may be said that such part of the national income as is not spent for consumption, or used by government, is saved and invested (see, especially, Chapter 7 above). Yet this apparently simple statement implies serious possibilities of maladjustment. For the people (mainly consumers) who make decisions to save are for the most part different individuals, operating under a different set of motives, from the

people (mainly businessmen) who make decisions to spend for investment. There is no inherent reason why the intentions of these two groups of people should coincide. But if the public's desire to save is not matched by plans for a corresponding volume of investment, then aggregate spending will not come up to expectation, and the national income and opportunities for employment will decline. In actual fact, the cut in their incomes will reduce the amount income-receivers save, so that it equals the amount businessmen decide to spend for investment. This is deflation.

Under different circumstances just the opposite may happen. If businessmen spend for investment more than income-receivers had intended to save, total spending will expand, and so will national income and saving, to the point where saving matches spending for investment. After World War II, for instance, consumers—tempted by the reappearance in store windows of many items long since unobtainable—soon lost their thrifty wartime habits. Simultaneously businessmen made plans, as and when controls were lifted, for long-deferred replacement and expansion of their capital facilities. As total spending increased, workers displaced from war industry were rapidly reabsorbed; at the same time the number of unfilled jobs grew apace. The nation, in common with most of the world, was experiencing inflation.

Unfortunately no accurate count has ever been made of the number of unfilled jobs. Yet we may guess that in 1947 and 1948 the number of persons seeking work (between one and two million) fell short of the number of vacancies, and that the level of employment actually exceeded "full employment" as defined above. However, this state of affairs has evidently been so unusual, and a shortage of jobs so much more common throughout the nation's history than a surplus, that it seems more important to study underemployment than overemployment.

THE COMPOSITION OF AGGREGATE SPENDING

Evidently the tendency for employment to expand and contract with aggregate spending—by consumers, businessmen, and government—is the crux of the matter. If we wish to understand why there may exist general unemployment (as opposed to unemployment of the special types described above), we must ask ourselves why at any given time aggregate spending is not greater than it actually happens to be. Likewise, if we want to judge the effect of any given policy upon the volume of employment we must assess its probable influence upon aggregate spending.

Now aggregate spending is just another name for the proceeds obtained from the sale of the goods and services which constitute the gro

tional product—a concept defined and analyzed in Chapter 7. There we w that gross national product falls into three parts: (1) commodities and rvices purchased by consumers; (2) plant and equipment purchased by ısinessmen, either for replacement purposes or for expansion; and (3) ɔmmodities and services purchased by government. To ask why aggregate ending is not greater is therefore to ask why (1) consumers did not spend ore for commodities and services, or (2) businessmen did not spend more ır investment, or (3) government did not spend more for the things it ırchases. Let us consider in turn each of these three types of spending.

ONSUMER SPENDING

The principal limitation upon consumer spending is of course the size f consumers' incomes, which in turn depends upon the level of aggregate ɔending. Because consumers' incomes are evidently both a cause and an ffect of aggregate spending, their level is not much help to us in attempt- ıg to explain why more spending did not take place during a particular eriod under study. Put otherwise, the size of the national income is some- ıing we have to explain, not something we can invoke in explanation. Evi- ently we must look elsewhere.

A consumer with a given income pays his taxes (about which he has ot much discretion) and divides the remainder of his income between ɔending and saving. Plainly he would spend more if he saved less. This fact xplains why "underconsumption" and "oversaving" have often been cited s causes of unemployment. Yet historically the proportion of income saved y the community has been rather steady; nor does it appear to have been ·articularly high during periods of heavy unemployment—in fact, rather the everse. These are facts which any explanation of general unemployment ·ased upon "oversaving" must take into account.

Of course the appropriateness of any given level of saving depends ntirely upon the availability of investment outlets. During depression years ·onsumers spend most of their incomes and save less than usual. Of course his is a time when investment outlets are scarce. In fact, the very un- ɔrofitability of investment forces income down to a point where consumers ·annot afford to save as much as they surely would do if they were better ɔff.

The fact that we save less in depression (because our incomes are maller) than at other times does not dispose of the claim that we suffer rom a tendency to save too much. The relevant question is, not how nuch we saved in a year of depression, but how much we would save year

by year under conditions of full employment. This would certainly be a larger amount per capita today than in (say) 1870, and would very probably represent a larger proportion of income also. This is because we are better off than we were in 1870, and on the whole people appear to save a higher percentage of their income the better off they are. In fact, we saved a smaller percentage of the national income during the 1930's than we did during the 1870's. Yet such a statement may merely indicate that we were further away from full employment, on the average, during the later decade than during the earlier.

We may, then, sum up as follows: When a considerable volume of unemployment exists, it usually is not possible for consumers to overcome it by spending more. The reason they cannot spend more is because their incomes, in the aggregate, have declined. (This is not "circular reasoning," but merely a description of a circle.) When, on the other hand, full employment exists, a decrease in the volume of consumer spending—unless it is offset by an appropriate increase of spending by business or by government—will lead to deflation and to general unemployment. Such a decline in consumers' expenditures may reflect either: (1) a desire of consumers to save more than businessmen concurrently wish to invest; or (2) a "buyers' strike"—an unwillingness of consumers to buy, at prevailing prices, as large quantities of some kinds of goods as are being offered in the market.

SPENDING FOR INVESTMENT

As we saw in Chapter 6 (Fig. 3), spending by businessmen for replacement or expansion of plant and equipment is far more variable than either consumer spending or peacetime governmental spending; this fact is reflected in the common observation that durable-goods output fluctuates much more widely than the output of nondurable goods (Fig. 18, p. 216). It makes a certain amount of sense, therefore, to say that the low level of aggregate spending in periods of severe unemployment is "caused by" deficiency of spending for investment. But it is important not to lose sight of the fact that—within broad limits—any form of spending has as much effect on job opportunities as any other form. Instead of blaming businessmen for reducing the level of their investment spending, we might perhaps equally well reproach consumers for attempting to maintain their normal saving habits in the face of a decline in investment.

We should first observe certain ways in which investment spending differs from consumer spending. Spending by businessmen for replacement or expansion of plant and equipment is not subject to any limitation com-

parable to that imposed upon consumer spending by the size of consumers' incomes. It is convenient and quite accurate to regard the public's saving as a source of investment expenditure (as when individuals lend their savings to business firms), yet few investment outlays are prevented by a deficient supply of saving. The reason is of course that the banks stand ready to provide businessmen with funds specially created for the purpose—at a price. Provided he considers the price reasonable, no solvent businessman is afraid, and few are unable, to obtain funds in this way. Moreover, just as investment spending may greatly exceed the amount of saving accumulated by the public in the recent past, so in a different situation the opposite may happen and some of these savings run to waste for lack of use.

What then determines the volume of spending for investment purposes? Part of the answer has already been given in Chapter 9. There we examined some of the reasons which make investment very sensitive to business-cycle fluctuations. Obviously if investment spending could be stabilized, unemployment in the capital-goods industries would be reduced, and idleness in the economy at large probably lessened as well. Yet it is not certain that this is the whole of the answer. Suppose that, by some means or other, fluctuations in investment expenditures were ironed out. Certainly the volume of investment would now be stable; but would it be large enough to furnish an outlet for the amount of saving the public would choose to perform under conditions of full employment? If we were to fill up the troughs in the business cycle, perhaps we would also remove the peaks. Here we are concerned with the general level of investment spending in the economy, rather than with its variations during the course of the business cycle.

The simple answer is that businessmen spend for investment when they think that the outlook is good and that the returns from the investment will more than repay the cost of borrowing. Starting from this principle, many writers have endeavored to explain why the outlook for investment is not as good now as it is supposed to have been during the decades immediately following the Civil War. Certainly the development of the West, and the application of steam power to transportation on land and sea, followed by the exploitation of electricity and the automobile, absorbed vast amounts of capital and yielded large profits. These industries now require little or no *fresh* investment, it is argued, while the new industries of today, such as synthetic materials, air transportation, and television, do not furnish investment outlets on a scale to take their place.

This argument that investment opportunities are shrinking suggests a reason why there might be little investment today if rates of interest were

still as high as they were in 1870. But first-grade corporate bonds, which needed to offer 6 per cent in 1870, can now be sold to yield 3 per cent or less. The facts cited by this school of opinion—the closing of the frontier, the slowing down of population growth, the absence of great new industries—are suggestive. They probably explain the decline in the rate of interest. But they do not offer a clear explanation as to why investment opportunities are no longer sufficient to furnish full employment, if indeed this be the case. Other writers have argued that current high rates of federal taxation, especially of corporate profits, act to check investment. This too is a possible explanation not yet supported by satisfying evidence.

GOVERNMENT SPENDING

Why does government spend? This question has already been discussed in Chapter 24. There we saw that certain kinds of goods and services can only, or can most efficiently, be furnished through community action. The range of things which people have felt the state should provide has varied widely, both from time to time and from place to place, but has on the whole tended to expand. Especially has public spending come to play a larger role, both here and abroad, in the provision of education, health, and welfare services.

Thus the share of the peacetime gross national product purchased by government has increased rather steadily, at least over the past three or four decades. This means, of course, that the potential influence of governmental spending policies upon the volume of aggregate spending has also increased. Yet—again, in peacetime—the influence of government spending is less than might be supposed. The reason is twofold. In the first place, if only because of bureaucratic inertia, public expenditure tends to be rather stable. Between World Wars I and II, for instance, it fluctuated in volume far less than did consumer spending or investment spending. In the second place, the ideal of sound finance calls for balanced budgets on the part of governmental units. Of course budgets often are not balanced. But we can see that when they are balanced, an increase or decrease of government spending tends to be accompanied by an increase or decrease of tax revenues. Now an increase or decrease of tax revenues generally leads to an opposite movement of consumer spending—although the correspondence is not exact. When budgets are balanced, therefore, a change in the amount of spending by governmental units will scarcely alter aggregate spending. If government spends more, the consumer spends less.

In case government budgets are out of balance, the situation is of course otherwise. For instance, an increase in public expenditure financed by borrowing will tend to raise aggregate spending. This statement is true whether the deficit is incurred by a local government for the construction of a municipal power plant, or is incurred by the Federal Treasury to pay for a work-relief program, to finance a war, or simply to cover the ordinary costs of operation of the federal government.

The statement that deficit financing by government will *tend* to raise aggregate spending was phrased thus cautiously for several reasons. Of course an increase of government spending *must* raise aggregate spending provided nothing happens to lower either consumer or investment spending. Indeed some students of this question have claimed that deficit financing by government will actually *increase* private spending. The argument is that most of the increased income which results will itself be spent by the recipients, thus raising income still higher, and leading to further (but continually smaller) "respendings" and consequent increments of income.

This is the celebrated theory of the "multiplier" which offers predictions that one million dollars of increased government spending will raise aggregate spending, not merely by one million dollars, but by two or three or four times as much, depending upon how much of each successive increment of income is "respent." This theory led during the depression of the thirties to the doctrine of "pump-priming," i.e., the belief that it takes only a little extra government spending to start a cumulative expansion of aggregate spending. New Deal experience in this matter was not very encouraging.

But we must also take account of the possibility that increased government spending may diminish private spending. The principal development which might lower consumer spending would be a rise in taxes to pay for the increased government spending: but this is ruled out of consideration by the fact that we are discussing a budget deficit. Yet there are other possible reactions upon private spending. First, consumer spending may be diminished somewhat if the government finances its deficit by borrowing from the public rather than from the banks. This is simply the familiar idea which we discussed in Chapter 21, i.e., that for the Treasury to borrow from the public is less inflationary than for it to borrow from the banks. Second, investment spending may be diminished as government spending increases—and aggregate spending therefore fail to increase—if businessmen do not like the outlook. This could happen because they fear increased taxes to service the mounting public debt, or—in the case of specific types of invest-

ment—because they fear competition from new government enterprises (e.g., in the public-utility field).

For these reasons the effect of changes in government spending upon aggregate spending cannot be accurately predicted. Certainly the unprecedented volume of wartime deficit spending by the government during the early 1940's was accompanied by an even larger growth of total spending. On the other hand, the expansion of total spending which accompanied the deficit spending of the thirties was much less than many New Dealers expected. And, in this case, much of the increase of total spending that occurred may have been due to causes other than deficit spending—e.g., a fear by the public that restrictions of production under the NIRA and AAA would cause consumer-goods prices to rise.

A BASIC DIFFICULTY IN POLICY MAKING

We have identified the cause of general unemployment with an insufficiency of spending. We have seen that spending may be classified according to the spenders—consumers, businessmen, and government—but that it is difficult or impossible in any given case to say *whose* spending is deficient. However, this difficulty is not very important from the standpoint of policy. The reason is that, as we have seen, increased spending by one group is just as effective—provided aggregate spending rises—as increased spending by any other group. For instance, to persuade consumers to save less (i.e., to spend more) in any given situation would apparently expand employment just as effectively as a move by investors to invest more. The first result in the form of new jobs would be in the consumer-goods industries in the one case, in industries making capital goods in the other.

The truth of this principle—that it is aggregate spending, and not any particular type of spending, which governs the volume of employment—has not gone unobserved. Indeed it has led those concerned with employment planning to ask, which type of spending is most subject to public control? To a minor extent, perhaps through tax measures, propaganda, and in other ways the spending habits of consumers and the investment decisions of businessmen may be subject to control through public policy. But the spending most obviously and directly under public control is of course government spending.

This is the background of numerous proposals that government spending should be used, in the event aggregate spending is inadequate, to fill the gap. And in this context, for the reasons we have noted, government spending often means deficit spending. This doctrine is not simply making a

virtue of necessity (in the sense that a government which cannot balance its budget with the revenues it can collect will, in any case, have to borrow enough to cover its deficit). It is rather that government, and in particular the federal government, should not attempt to balance its budget in a time of general unemployment, but should instead let its revenues decline while maintaining or increasing its expenditures. To such a proposal it has been objected that, if it were adopted, the federal debt would tend steadily to increase. Certainly the experience of the 1930's suggests that this is likely to happen. Deficit spending by the federal government, undertaken mainly as an anti-unemployment measure, raised the debt from twenty-two billion dollars in 1933 to thirty-six billion in 1939.

In reply the proponents of deficit spending point out that general unemployment in the past has usually been an accompaniment of cyclical ups and downs in business. They urge, perhaps rather hopefully, that the debt contracted during the downswing should be repaid during the upswing. That is to say, as soon as business revives and unemployment disappears, government should contract expenditures and institute a tax program so as to produce a budget surplus. Instead of being balanced each year, the budget would be balanced only over the seven- or eight-year period of cycles in business activity. Certainly there is nothing sacred about a twelve-month period. We do not arrange to balance federal receipts and expenditures every month: why then should we insist upon doing so every year, rather than every eight years?

The argument that deficit spending will not lead to permanent increases in the public debt has been called unduly optimistic in at least two respects. First, it has been suggested that Congress, once convinced of the virtues of deficit financing, would in practice find it very hard, if not impossible, to recognize the moment when the policy had lost its virtues, and was due to be replaced by a budget surplus. A second, and perhaps more fundamental, criticism of the countercyclical spending program outlined above concerns the question as to whether or not general unemployment is in fact a purely cyclical phenomenon.

Let us suppose that the government has no positive employment policy and that the budget is balanced each year. Let us suppose further that in the depths of depression the number of idle persons exceeds the number of unfilled jobs by a certain amount, and that in the peak year of a typical boom the unfilled jobs exceed the unemployed by the same amount. In that case we could say that the job shortage in bad times was matched by the labor shortage in good times. During the boom aggregate spending would be just as excessive as it was deficient during the slump. In that case a coun-

tercyclical spending policy really could match budgetary deficits to supplement deficient private spending in some years with corresponding surpluses to counteract excessive private spending in other years, and hope that over a complete business cycle there would be no net increase in public debt.

But suppose on the other hand that the shortage of aggregate spending in years of depression is not balanced by a corresponding excess in boom years. Suppose—to consider an obvious but unpleasant possibility—that there is almost always a shortage of aggregate spending in good years as in bad, though of course a smaller shortage in good years than in bad. In that case a policy of deficit spending by government whenever the employment situation demands it must plainly lead to a steadily rising public debt.

A STEADILY RISING NATIONAL DEBT

The opposition between these points of view is so significant, and the validity of one view or the other so important for future employment policy, that the controversy must be carried a stage further. Many of those who urge a policy of deficit spending as a means toward full employment admit freely the possibility—indeed even the probability—that such a policy may lead to a steadily rising public debt. They point out that, as we saw in Chapter 26, the burden of the debt is confined to the need to meet interest payments on it; that with rising productivity levels the national income may be expected to increase in the future as it has done in the past; and that, provided the national debt does not rise too fast, no increase need occur in the *ratio* of interest charges to national income. They appeal, furthermore, to the analogy between government and corporate finance. A corporation thinks nothing of going into debt to acquire additional assets; that, indeed, is how it grows. Why then should the United States Treasury not go into debt to acquire capital assets? It is admitted that the assets the Treasury obtains, or helps states or local units to obtain, are most generally hospitals, highways, and other public improvements which do not yield an income. Yet they may be just as useful—and, fundamentally, just as productive—as many assets which do yield an income. This defense of deficit spending is of course confined to spending for the creation of capital assets, and would have no validity if the deficits are used for relief payments or to cover the current costs of government.

The critics of the proposal make the following rejoinder. Perhaps a steadily rising national debt is not in itself anything to worry about. Perhaps it makes sense for public agencies to finance public investment from borrowed funds just as private corporations finance private investment.

for investment by businessmen? Are we certain that fear of increased taxes, or fear of competition by public enterprises, may not diminish such business spending?

At this point the critics cite the low level of private investment which accompanied deficit spending by the New Deal during the thirties. Certainly the less private spending for investment there is, the more government spending is necessary in order to achieve a given level of aggregate spending. If government spending really does have this effect on private spending, then the critics can claim that deficit financing is like a drug—the more you take, the more you have to take. But evidence can be cited on the other side, too. The biggest dose of deficit spending ever undertaken —for the financing of World War II—was followed by the largest splurge of investment spending in which American businessmen ever indulged.

We now may summarize the foregoing argument. General unemployment results from an insufficiency of aggregate spending, either cyclical or chronic in character. It is to be distinguished from unemployment due to special or temporary causes, such as frictions and seasonal changes. The number of jobless persons can be diminished and the number of unfilled vacancies increased by expanding aggregate spending. Of the three kinds of spending—by consumers, by businessmen for investment, by government—only the last is obviously and readily subject to public control. Most proposals looking toward full employment have therefore advocated government spending in one form or another. The wisdom of using deficit financing for this purpose has provoked a debate the issues in which have not yet been resolved.

THE ORIGINS OF EMPLOYMENT POLICY

Laissez faire vs. *control.* The production of goods and the employment of productive factors bear a relation to each other much like the two sides of a coin: relatively large production is accompanied by relatively large employment, and vice versa. And both depend upon the volume of spending. Hence two contrasting attitudes are possible toward the problem of unemployment. The first is that of letting employment be "governed by the market," in the sense that opportunities for making profits will lead employers to create job opportunities for workers. The reverse of this, that prospective losses will lead employers to reduce the number of job opportunities, also is recognized.

From this point of view any deficiency of jobs arises either (1) from monopolistic restrictions upon employment and output, practiced by labor unions or employers, or both, or else (2) as the temporary result of economic excesses and errors committed by the community at large during every period of boom. Supporters of this view are willing to concede that those who practice monopolistic restrictions should be prosecuted under the common law or the antitrust acts, but booms and slumps are regarded as something about which very little can be done. This, in essence, is the attitude toward employment that is emphasized by the doctrine of *laissez faire*.

The second attitude toward the problem of employment substitutes an active policy for the passive one. Instead of allowing employment to be governed by the market, it would govern the market with a view to maintaining employment as fully as possible. This also would lead to a correspondingly high level of output. Some writers indeed have urged a level of spending which exceeds that necessary to maintain full employment as defined above, and have argued that we should not worry about an excess of unfilled jobs. Sir William Beveridge justifies this position as follows:

> The reason is that difficulty in selling labor has consequences of a different order of harmfulness from those associated with difficulty in buying labor. A person who has difficulty in buying the labor that he wants suffers inconvenience or reduction of profits. A person who cannot sell his labor is in effect told that he is of no use. The first difficulty causes annoyance or loss. The other is a personal catastrophe.[1]

The argument reflects the liberal thesis that society exists for the individual, and concludes that society cannot serve the individual fully without some measure of economic control.

In its public policy toward employment, the United States for most of its history saw main emphasis placed upon the doctrine of *laissez faire*, but appears now to have entered upon a phase in which there is a growing belief that employment should be made subject to control. Periods dominated by particular ideas or beliefs cannot be laid off sharply in a chronological table. Yet it seems clear that the period of greatest confidence in *laissez faire* commenced in the latter half of the eighteenth century. For English-speaking peoples, the beginning (in the sense of the first systematic development of the doctrine) came in 1776 with the publication of Adam Smith's *Wealth of Nations*. We are so near to the beginnings of the newer doctrine that its historical perspective is less sharp. It seems probable that

[1] Sir William Beveridge, *Full Employment in a Free Society*, Norton, 1945, p. 19.

at least in the United States, in the heavy unemployment of the early 1930's The old emphasis was maintained for about a century and a half; how long the newly rising emphasis will continue no one can say.

The beginning of the emphasis on *laissez faire* was associated with the early phases of the Industrial Revolution, in which steam power and machines were multiplying the volumes of goods men could produce. In the United States it was associated also with an extremely favorable ratio of natural resources to population. These conditions implied an unusual scarcity of labor in relation to the other productive factors. The emphasis on control in the interest of employment has arisen in close association with a highly specialized division of labor, a greatly increased dependence of individuals on making and spending money incomes, an enormously expanded and increasingly impersonal market. The changes are symbolized by the growth of great cities into centers of industry and trade.

THE EMPLOYMENT ACT OF 1946

A shift on the part of the public toward a positive national policy of promoting employment and of making this policy pre-eminent in our domestic affairs is reflected strongly in recent politics. Both President Roosevelt and Governor Dewey spoke urgently to this end in their presidential campaigns of 1944. The British White Paper of 1944, "Employment Policy," which begins with the declaration that "the Government accept as one of their primary aims and responsibilities the maintenance of a high and stable level of employment after the war," was widely acclaimed by American political leaders. In January 1945 Senator Murray of Montana introduced into the Senate a bill "to establish a national policy and program for assuring continuing full employment" in the United States. After lengthy debate the measure finally emerged from Congress, and was signed by the President, as the Employment Act of 1946.

In Section 2, the act declares:

. . . it is the continuing policy and responsibility of the Federal Government to use all practicable means consistent with its needs and obligations and other essential considerations of national policy, with the assistance and cooperation of industry, agriculture, labor, and State and local governments, to coordinate and utilize all its plans, functions, and resources for the purpose of creating and maintaining, in a manner calculated to foster free competitive enterprise and the general welfare, conditions under which there will be afforded useful employment

opportunities, including self-employment, for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power.

The legislation has been attacked both by those who think it goes too far, and by those who think it does not go far enough. The first group, adhering to the laissez-faire doctrine outlined above, think that Congress has made promises, expressed or implied, which in the nature of things it cannot fulfill. The second group regret the deletion of the phrase "full employment" and the substitution of "maximum employment" as the stated objective; they consider the latter phrase somewhat ambiguous. Those who would have liked a stronger measure also feel that for the federal government to plan "to use all practicable means *consistent with its needs and obligations and other essential considerations of national policy*" provides an unnecessary loophole. They would like to see employment policy take precedence over all except the most vital considerations of national interest, such as for instance defense.

CONTINUING OFFICIAL STUDY OF EMPLOYMENT

The Employment Act does not specify the precise methods through which "maximum employment" is to be attained. It takes no stand upon such controversial issues as government spending and deficit financing. But it has set up administrative machinery. A three-man Council of Economic Advisers is charged with the following duties: (1) to "assist and advise the President" in preparing an annual Economic Report to Congress; (2) to "gather timely and authoritative information concerning economic developments and economic trends" which could affect the level of employment; (3) to "appraise the various programs and activities of the Federal Government" for their effects upon the level of employment; (4) to "develop and recommend to the President national economic policies to foster and promote free competitive enterprise, to avoid economic fluctuations or to diminish the effects thereof, and to maintain employment, production, and purchasing power"; and (5) to "make and furnish such studies, reports thereon, and recommendations with respect to matters of Federal economic policy and legislation as the President may request." In sum, the council's job is to carry on research, to examine the policies of federal agencies to see that they do not conflict, and to furnish the President with advice.

In addition to the Council of Economic Advisers the act provides for a Joint Committee on the Economic Report, composed of members of both Houses of Congress. Its function is to receive the annual Economic Report

committees of Congress concerned with economic matters in formulating legislative proposals relating to employment policy.

If this description has a flavor of vagueness, that is due to the language of the act itself. Plainly its purpose was, not to offer an analysis of the employment problem, but to set up machinery to study the question. As this is written, more than two years have elapsed since the passage of the act; during this period the nation has been plagued with an excess, not with a deficiency, of purchasing power. The appropriateness of the machinery, and the willingness of Congress and the executive departments to make use of it, have yet to be tested.

We now have seen something of the nature of the employment problem, and have traced the steps whereby the federal government has assumed a considerable degree of responsibility for its solution. We shall conclude this chapter with a discussion of some of the difficulties which may face the government—and by implication, therefore, all of us—in attempting to maintain full employment. At some of these difficulties we have already hinted.

DIFFICULTIES ARISING FROM OUR HABITS

Because our economy is highly unstable, policies designed to secure stability must be very flexible. Habits of thought and action, highly commendable in one situation, may become harmful, or at least inconvenient, in another. In time of war, for instance, when government spending is abnormally heavy, consumers' goods are scarce, and prices are rising, we were all rightly encouraged to cut all unnecessary spending and urged patriotically to save. In times of depression and unemployment, on the other hand, aggregate spending is deficient. To be sure, it is a gross oversimplification to say that deficiency is *caused* by individuals' determination to save. Yet one way for spending to increase is for consumers to spend more, i.e., to save less. Yesterday's virtue is tomorrow's vice.

Habits of thrift once learned are not easily or readily unlearned. Why should they be? Belief in the moral grandeur of saving goes clear back to the Protestant Reformation, as a result of which the sin of avarice was converted into the duty of abstinence. This means that, if anything, it is even harder to check deflation by encouraging consumers to spend than it is to check inflation by encouraging them to save. Thus a policy which rests upon attempts to persuade consumers to change their habits does not pass the test of flexibility.

A rather similar difficulty surrounds any proposal to vary government spending, for instance in a countercyclical manner. Legislators are but citizens writ large, and it is perhaps almost as difficult for them to appreciate that increased government spending also may be a vice at one moment and a virtue at another. Indeed some critics fear that government spending to reduce unemployment will lead to inflation, because it will prove impossible to reverse the policy once full employment is reached. What these critics really fear is that the policy will not prove sufficiently flexible, i.e., that our legislators' belief in the virtues of thrift, instead of being temporarily subdued, will be permanently eradicated.

Of course legislators are at all times sensitive to public opinion. It is their business to be. Yet here lies another, closely related difficulty. Just as the intractability of certain features of the moral climate make for inflexibility, so the very fickleness of our day-to-day interests makes it hard to insure that a policy will "follow through." Measures to stabilize or expand employment, if they are to operate effectively, cannot be matters of vital public concern only when there is actual or prospective mass unemployment. One of the difficulties in a democracy (there are other difficulties in nondemocratic states) of maintaining public policies which are both flexible and consistent is the tendency of public interest to blow hot at some times and cold at others.

In combating unemployment, we have had bitter experiences in our recent past. In 1921, a time of deep postwar depression, there was strong public demand that action be taken to prevent unemployment. President Harding organized a group of prominent citizens who met in September of that year as The President's Conference on Unemployment. The group engaged a staff of the nation's leading experts in this field to prepare an analysis of the unemployment problem and to make proposals for national policy. The experts prepared a thoroughly competent report and indicated positive and highly practical policies to follow. Time was required for the necessary research, however, and it was not until two years after the conference was held that the full report of the experts was published. By that time the illusory prosperity of the 1920's was launched, the level of employment was once again high, and candidates for public office appeared to gain more popular support from expressions of faith in everlasting prosperity than from sober proposals for preventing unemployment. In spite of the excellent preliminary work that had been done, we came to the end of the decade without having given effect to any of the experts' proposals and were caught completely off balance by the debacle of 1929 and succeeding years.

DIFFICULTIES DUE TO INFLEXIBLE STATE AND LOCAL SPENDING

Thus far in our discussion we have tended to identify government spending with disbursements by the United States Treasury. Recently federal expenditures have exceeded those by state and local governments, but prior to World War II states and localities each year spent considerably more than the Treasury. The Employment Act, as noted above, declares it to be the responsibility of the federal government to promote employment "with the assistance and cooperation of . . . state and local governments. . . ." It is in fact particularly important that state and local spending should be brought within the framework of any policy intended to regulate public spending in general with a view to stabilizing employment. The reason for this is that an especially large share of state and local spending goes for items like highways, buildings, and public improvements, outlays for which can—from a technical point of view—readily be postponed. That is to say, such expenditures can be expanded and contracted—in accordance with a need for more or less aggregate spending—without too much difficulty. The fire department has to be maintained year in and year out, but highway improvement could advantageously be concentrated in periods of depression. Often also costs are lower in periods of depression, and construction would be cheaper then.

Yet this is not how state and local governments commonly view the matter. In hard times when everybody else is spending less, they too are infected with a desire to economize at all costs. At such times their tax revenues are contracting, and they are not easily tempted to borrow, even for the most desirable projects. When business is booming, on the other hand, and their own revenues are expanding, they tend to be open-handed and quite willing to incur debt. The tendency to assume at some times that because consumers and businessmen are spending lavishly government should do the same, and at other times because consumers and businessmen are retrenching so should government—this tendency is present in Congress, too, but it is even more prevalent among state and local lawmakers.

Under the best of circumstances, therefore, the adaptation of state and local spending to a full employment policy would probably meet with psychological obstacles. Worse, the persuasive power of the federal government in this matter is rather slight. Perhaps federal grants-in-aid to state and local governments might be conditioned upon an agreement by the latter to accept the advice of the Treasury or the Council of Economic Advisers in

timing their outlays. But the federal government has no direct power to require or to restrain local spending.

DIFFICULTIES RAISED BY THE RELIEF PROBLEM

If a full employment policy is adopted and meets with reasonable success, that is equivalent to saying aggregate spending is maintained at a level which keeps everybody—or almost everybody—in useful work. What this useful work happens to be in individual cases is settled by the market, or in the case of government employees by the decision of some legislature that such and such a form of public expenditure will promote the general welfare. Otherwise, if the policy is not so successful, and there is large actual or prospective unemployment, the temptation to "make work," or even to make cash relief easier to come by, can become strong. From the viewpoint of the legislator or public official who is told that government spending should be expanded, the expansion of relief payments has more than one attraction: it is a quick and administratively simple way of spending money; it partially conceals the unemployment; and—in some cases—it may strengthen a local political machine in which the administrator is interested. Of course relief is needed, especially for unemployables and those of low efficiency who are the first to lose their jobs in bad times (see Chapter 18). But to relax relief standards, although tempting, is not the best way to expand public spending when aggregate spending is deficient.

The development of make-work projects has little more to recommend it. Before the surrender of Japan, for example, it was urged in many quarters that large-scale employment in war industries should be continued for some time after the war, and that the armed forces should be demobilized only as rapidly as jobs could be found for their members. This argument, which in the event had little practical effect, was set forth as a way of cushioning the economic impact of the war's end. So far as usefulness goes, those artificially retained in war jobs would have been no more usefully employed than persons engaged in those much-ridiculed occupations, raking leaves and selling apples. To descend one step lower, we may even admit that it is better to hire men to "dig holes in the ground and fill them up" than to do nothing at all. But such work is both beneath the dignity of workers and an insult to our collective intelligence.

This train of thought has led advocates of public spending to make two proposals. The first is that a well-elaborated schedule of public works should be prepared and held in reserve by the federal government and by political subdivisions against the need for additional spending. There is real difficulty

here, i.e., to know how rapidly public-works construction can be started, and whether it can conveniently be stopped when spending recovers. The second proposal is that a budgetary deficit should be allowed to develop through the deliberate remission of taxes, the idea being to encourage an increase of consumer rather than of government spending. The risk here is that the increment in consumer incomes after taxes may be saved instead of being spent.

FULL EMPLOYMENT AND INFLATION

Any policy designed to expand employment can be considered inflationary in the sense that it is designed (1) to resist deflation, and (2) to reverse a deflationary process (if such has begun) and to undo its effects. Because of this, expanding employment is likely to be accompanied not only by expanding production but also by rising prices, just as falling production and falling prices accompany declining employment. This does not seem to be a matter for anxiety. What we mostly mean by inflation is at once more drastic and more dramatic than this. We think rather of a situation in which rising prices and rising wages chase each other. Is there any danger of drastic inflation?

Let us take one more look at the results of an expansion of aggregate spending. So long as excess capacity and unemployed workers coexist, increased spending will lead chiefly to larger output and only in minor degree to higher prices. As soon as full employment is reached, and no further increase of output is technically possible, then of course further increments of spending lead merely to higher prices. On this view, the cost of living will rise sufficiently to cause labor unions to demand higher wages for their members only if spending is pushed beyond the point of full employment. Consequently there is no risk of wages and prices chasing each other upward unless and until this happens, i.e., until there are more unfilled jobs than idle workers.

But is this view correct? At least three objections have been raised by critics who fear that employment policy will lead to an inflationary rise in prices even before full employment (as we have defined it) has been reached. First, the stresses of under- and overemployment are never equally severe in all industries. Therefore unfilled jobs (overemployment) will develop in some industries much sooner than in others. When this happens, there will be a rise in the prices of those products whose output cannot be increased further. Prices of some items may rise quite sharply long before unfilled jobs exceed idle workers in the economy as a whole. If these com-

modities should be important constituents of the cost of living, a movement for higher wages may develop while there still are many unemployed. Second, if there exist in any industry strongly entrenched cartels, trusts, or other price-fixing agencies, the same upward trend in product prices could begin even before all unemployed workers in that industry have found jobs. Again, if this rise in prices affects the cost of living, a movement for higher wages may develop. Third, in an economy where there are really strong and well-entrenched labor unions, it is perhaps not even necessary for an upward movement in the cost of living to occur before demands for higher wages are made. Possibly a mere decline in the number of their members out of work may serve as a signal to union officials to initiate a movement for higher wages.

The emphasis on higher wages as an unwelcome development in the situation described is due to the danger that aggregate spending might expand, and prices rise, still further. In that case an inflationary spiral would have begun. Clearly the objection would not apply in the case of wage increases accompanied by higher productivity. But the probability that wage increases, not accompanied by corresponding increases of productivity, will occur before full employment is reached adds greatly to the problem of avoiding inflation. Perhaps indeed some kind of compact with the principal labor unions might be the solution. But enough has been said to show that here also lies a difficulty.

This survey of some of the principal difficulties which critics have predicted indicates that the formulation and execution of a policy of full employment would be no easy task. Evidently its success might easily require a revolution in our ideas of what is sound finance, a further centralization of power in Washington, and a quite extraordinary measure of self-denial on the part of labor unions. Here is another complicated problem in which social values are confronted with social costs. The value is great—and the costs may be high. Much can be accomplished by moderate measures dictated by justice and a sense of rational orderliness. But solution of the problem of unemployment entails much more. Ultimately the question may well be how high a price we are willing to pay for a solution—whether, in other words, we really want the problem solved.

CHAPTER THIRTY-TWO

The problems with which we conclude

CONCERNING SKEPTICISM AND FAITH

The present always is a point in time which lacks both the consecutiveness that history gives to the past and the promise with which our hopes and our plans clothe the future. It never quite "belongs" either to what we understand to have gone before or to what our expectations lead us to believe will come after. There are times, of which our own is a painfully pertinent instance, when the present is so lacking in continuity, either with the future or with the past, as to cause men's faith in their ways of thinking and acting to give way to disillusionment and doubt. In such times more and more people come to inquire why it is that their own time lacks both the orderliness of the past and the promise of the future. Such inquiry cannot be limited to considerations of personal opportunity for personal benefit, as is most often the case in ordinary times, but must lead the inquirers to examine, and to evaluate, the controlling conditions of their social life. Today, the skepticism of many Americans has come to be centered on one or another aspect of the organization and operation of our economy.

Positive opinions vary all the way from one extreme to the other: many believe that we have far too much governmental control over economic affairs; many others that we have far too little. Those who favor less intervention by government differ among themselves as to the specific governmental controls and regulations that should be removed; and those who favor more intervention differ among themselves as to the specific controls and regulations that should be established. In the arguments concerning these different views, the meanings of traditional words and concepts become confused; but more of some kind of "liberty," or "security," or "control" for certain groups of people or for certain activities, and less of

it for others, provides the crux of most of the varying positive ideas. Different opinions, applying to all aspects of domestic and foreign economic policy, always have existed in this country. That extreme differences have arisen in our past is testified by Jacksonian Democracy, by Whiggery, by Populism, by the Granger Movement, and by the free-silver agitation of the nineteenth century. Yet the current period is extraordinary in this regard, both as to the intensity of conflicting views about the operation of the American economy, and as to the wide diffusion among our people of serious thinking about economic problems.

Economic discussion in the twentieth century—especially during the last three decades—has been concerned more with "problems" and with "adjustments" than with progress or fulfillment. This has been so, with a lapse of a few years in the twenties, in spite of our possession of amazing new techniques and skills and of a productive capacity much larger, both in fact and in terms of potential per-capita output, than any nation ever possessed before. World War I was the initial shock of the twentieth century to our traditional American ways of thinking. The problems that it brought and left behind led to the changed emphasis in economic discussion mentioned above. The new faith in "prosperity everlasting" of the twenties went bankrupt along with the fabulous boom on which it was based. The New Deal of the thirties brought an outpouring of devices—sometimes contradictory or conflicting, almost always well intentioned—aimed at restoring economic operations and at righting the wrongs done to various groups of our people; but it gave us no new set of working principles to which the generality of people might pin their faith. And now, although our tremendous national resources and energies enabled us to preserve our "way of life" from destruction by our totalitarian enemies, our convictions are further disturbed by economic distortions due to World War II and by revolutionary tensions extending over much of the world.

THE PAST VIEWED FROM THE PRESENT

Such uncertainties and contradictions did not always beset us. The nineteenth century, so near as history goes, but so far away as measured by the spirit of the times, was—as we can now see—an age of faith. People of that time were confronted with problems of great import and intricacy, both as to their personal concerns and as to the destinies of their country. But, in regard to the ordinary run of affairs, these people generally had faith in themselves; in regard to further-reaching issues, they had faith in their ability to reach correct solutions through their system of self-govern-

ment under a beneficent Constitution. They were warmed to their faith by evidences of progress and by consciousness of fulfillment. They were imbued with that highest form of liberal-democratic faith which consists in men's belief in their own ability to deal with their own problems.

With the perspective that we now have, it seems that the age which gave birth to economic liberalism was, in a general sense, well served by it. As a mode of organizing economic life in the eighteenth and nineteenth centuries, economic liberalism offered many practical advantages. It superseded mercantilism, a system which combined decaying medieval restraints with newer ones imposed by imperialist nation-states. Mercantilism was stifling to enterprise, restrictive to production, an impediment to most men's efforts to raise their material levels of living. The "obvious and simple system of natural liberty," which first won support as men revolted against mercantilist ideas, offered reasonable assurance that the community would benefit through the victories of abler businessmen over their less efficient rivals, through the opportunity afforded the superior workmen to improve their economic status, through the security against market exploitation that competition promised to buyers and sellers alike. We should not suppose that, even in the early days of the republic, the most efficient businesses always were victorious, nor that opportunities were everywhere equal for all men, nor yet that competition made exploitation wholly impossible. But the simpler economic institutions of that time, working with a simpler technology, functioned well enough.

Adherence to the "system of liberty" probably has lasted longer and has been more consistent in the United States than in any other country. It even is probable that the unprecedented economic development of this country under the aegis of laissez-faire institutions has given the principal encouragement—in most cases a limited one—to other countries to adopt similar institutions. In our case the frontier provided a setting for "natural liberty." Frontier life, while it lasted, supplied both the symbol and the substance of individual opportunity. Except for the "log-rollings," the "raisings," the "corn-huskings" and other forms of spontaneous co-operation, the frontiersmen wanted little of the community except to be let alone. *Laissez faire, laissez passer!*

THE ROLE OF GOVERNMENT

According to the traditional doctrine of *laissez faire*, each individual is the best judge of his own needs, and each will obtain the most satisfaction if he is allowed to buy in the cheapest market and sell in the dearest

From this premise it followed that the less government interfered in economic life the better off we all should be. Planning, in the sense of the foresight and consistency of action that are prerequisites to sound administration, should be welcomed in connection with those particular government activities (e.g., the maintenance of law and order) which, as everyone recognized, could not be delegated to private enterprise. But planning for some larger objective—economic stabilization or full employment, for instance—was held to be unnecessary and even harmful. In colonial times, or in the early days of the republic, it could be claimed that governmental budgets were so small, and the economic activities of the state in general so restricted, that their effect upon the market—upon commodity prices and the use of productive resources—could safely be neglected. It would seem that *laissez faire* was a possible policy because the government was not yet a big operator.

At this point the objection may be raised that if our government had minded its own business, or kept in its proper place, it would never have become a big operator. But leaving aside the controversial questions concerning specific governmental interventions in the economy, there remain certain functions of the state which exponents of *laissez faire*, from Adam Smith to the present, have generally agreed to be appropriate. These functions, which were outlined in Chapter 1, are three in number: (1) to defend its citizens against aggression by a foreign power; (2) to protect its citizens against injury to their persons and property by individuals or groups within the state; and (3) to perform services which are desirable to the community at large, but which do not lend themselves to dependable or effective performance by private initiative. Under conditions of the recent past and the present, the performance of these functions alone entails a volume of activity sufficient to make our government a big operator.

Let us take these functions in order: (1) The defense of the nation by the primitive methods of military science in vogue during the eighteenth century involved no elaborate economic organization. Troops lived off the country; arms were fashioned in small, local workshops. Progress in the art of war has changed all that. Today no nation feels safe without a vast and highly specialized munitions industry costing billions of dollars. (2) The cost of internal security has grown less than that of external security. Yet here too conditions have changed. For possibilities of injury to person and property have multiplied with changes in production techniques and in economic organization. The hazards of mechanical transportation (especially by air) and of mechanized manufacture have called for elaborate inspection services. The growth in the size of the business unit led to the

trust movement, and a demand by the consumer that his pocket be protected. (3) Changing technology has tended to expand the services which are desired by the community at large, but which do not lend themselves to dependable or effective performance by private initiative. In particular, the invention of the automobile vastly increased the scope and cost of necessary publicly furnished highways.

It is plain that even the classical functions of government have expanded inexorably during the past century and a half. Furthermore, the third category—the provision of services which do not lend themselves to effective performance by private initiative—has expanded far beyond the limits which nineteenth-century opinion contemplated or would have approved. Two examples will suffice. The simultaneous development of water power, navigation, flood control, and irrigation in our larger drainage basins affords a case in point. Compulsory unemployment insurance and the provision of old-age pensions may also be cited.

Today government employs directly one wage or salary earner in eight, and in addition buys in the market place much output of private industry. A sixth of the gross national product is produced by government or to government order. The public debt is so large, and the control of the Treasury over the financial sector of the economy so complete, that the market rate of interest is largely a result of government policy. It is obviously impossible for operations in the government sector of the economy not to influence activity in the private sector.

The government is far too big, in other words, to achieve anything which could be called *laissez faire*. It seems anomalous, but true, that the performance even of those functions regarded by Adam Smith as appropriate to the state in a laissez-faire economy has come to entail a scale of state activity that is an effective denial of *laissez faire*. Even if, as many urge, our several layers of government were to restrict their activities to doing as little as possible, there still would not be a "restoration" of *laissez faire*. As it is, with the accretion of many functions Adam Smith would have questioned, the operations of our government are now conducted on so large a scale that almost everything it does or fails to do has some impact on the economy.

FREEDOM AND CONTROL

A basic condition which we encounter repeatedly in the study of society is that of conflicting motives. Commonly there are forces that impel people to proceed along certain lines, and other forces that hold them back.

Thus, in any economic system, the important sets of forces are on the one hand those which lead people to work, to plan and organize production, to save, to invest; and on the other hand those which deter people from doing these things. The motive power of want (which may be for basic necessities, for luxuries, for prestige, or for power) is opposed by the inertia of laziness, fatigue, boredom, uncertainty of the future, or the habitual set of values we call "living in the present." These forces exert their influence and reach an equilibrium in the market place. It is in the market place that the choices of individuals are expressed. And it was with the market place that classical writers on economics—the systematic exponents of *laissez faire*—were principally concerned.

This is so for the very good reason that in a laissez-faire system the market place was the only channel through which an individual's freedom of choice could be expressed. The classical writers adopted the premise that the whole economy is the sum of its parts, and that the parts are free people choosing what they will and will not do with regard to consumption, work, the planning and organization of production, saving, and investing. The general equilibrium of individual actions resulting from these choices occurring in and through the market, has provided the focus for most economic study and speculation in the United States and much of Europe in the hundred years since the publication of J. S. Mill's *Principles of Political Economy*. And, in spite of the mixture of governmental controls with laissez-faire liberty in our present economy (or, perhaps, even because of this mixture), we are as seriously concerned today as were many of our forbears with the forces that impel people to economic action and the forces that hold them back, as these forces express themselves in the market place.

Yet we also are seriously concerned with these same forces as they influence, not the economic choices made by individual people in buying and selling, but the shaping and direction of our economy itself. The whole economy still is the sum of its parts, but the range of an individual's choice today extends beyond his transactions in the market. For it is the function of the voter, through the ballot box, to decide public policy. Our largest problem concerns the balance that should be struck between freedom and control in economic affairs.

How much control, and of what, do we wish our various layers of government, especially our federal government, to assume? Or, stated in reverse, how much of what kinds of individual liberty and initiative do we wish to retain? Especially in view of distortions caused by war, we must expect our government to go some distance in achieving over-all efficiency,

and balance in our economy. But how far can it go without our suffering the economic inefficiency and unbalance that results from undertaking too large a task and from overregulation? We also must expect our government to champion and protect individuals who may be tyrannized by powerful organizations in the form of big business or big labor. But, again, how far can we go in the attainment of this objective without bringing upon ourselves, as individuals, the tyranny of big government?

This is, for us, a new kind of choice, strikingly different from that with which the economic theory of the market place was concerned. And it also is strikingly more difficult. The laissez-faire theorist felt secure against excesses; if particular commodity prices became too high, or the prices of particular productive factors too low, relative to other components of the economy, people were expected to act in ways that would restore the equilibrium of the whole. This was called the process of automatic adjustment, i.e., of automatic response by the productive system to the stimuli of individuals' behavior. It assumes a very wide distribution of responsibility, and a lack of concentration of bargaining power in any one spot. So long as their individual self-interests keep people apart, there is little danger that any single individual will be able to oppose the public interest by exploiting other members of the community. Such probabilities assume, of course, that the powers of all people, measured by wealth, status, or bargaining position, are about equal.

CONTROLS EXERTED BY ORGANIZED GROUPS

But when group interests become, for large numbers of people, superior to their individual interests, there is strong likelihood that powerful organizations may, in their pursuit of group interests, interfere seriously with the interests of other elements in the community. The first condition calls for little government so far as economic affairs are concerned. The second calls for interventions in the public interest, and so creates big government. Yet that is but to remove the problem to another level. For the use of political power to curb economic power is not always effective, as the history of the antitrust movement has demonstrated. Moreover, the result may merely be to transfer the struggle from the economic to the political plane, as has occurred in the field of labor relations. It is not certain that the ballot box is an effective substitute for the market place.

There is no real doubt, of course, that in our system the suffrage is the ultimate arbiter of political choice, in the economic field as elsewhere. But the struggle on the political plane over the economic destinies of indi-

viduals and groups will often be decided more immediately by what prominent politicians believe to be expedient, by the activities of pressure groups, or by editorial policies and propaganda. The awards will be made, not by the impersonal fiat of a market operated by economic man, but by the decision of political man. The classical economists attributed a high degree of rationality to *economic* man; perhaps they exaggerated both the range of his knowledge and his penchant for taking thought. May we not be led into more dangerous error if we attribute similar qualities to *political* man?

The problem of balance between freedom and control in our economy has been stated above in its broadest terms. Actually the problem never arises in so general a form in our practical affairs. The situations about which decisions have to be made, and actions taken, are tangible and concrete. Hence the conflict between freedom and control resolves itself into specific questions of policy with regard to particular areas of economic interest, and into questions of over-all consistency among the several sets of policies applying to the different areas. We shall consider here some of our most important policy areas and some of the factors involved in making policies in each area. The three areas of policy that are causing us deepest concern today are domestic employment, the relations between labor and management, and our international economic relations.

THE EMPLOYMENT PROBLEM

The "obvious and simple system of natural liberty" did not allow the possibility of an "employment problem," did not consider that any significant number of people could ever fail to find some employment for which they were reasonably well suited. Provided that individuals might enter freely into all occupations (barring necessary costs of training), and provided that employers competed for labor and workers for employment, it was hard to see how unemployment could exist for any length of time. In any case, if a laborer should be unable to find an employer, it was not too hard for him to set up in business on his own account, as an independent farmer, craftsman, or storekeeper. If, nevertheless, unemployment became a problem, then plainly some of the conditions mentioned must have remained unfulfilled. So argued Adam Smith and his followers.

Restrictions. It is not certain that, even in the much simpler world of their time, the classical economists were justified in claiming that a lack of jobs could be due only to the existence of man-made obstacles to competition. Yet when they claimed that the grant of a royal monopoly abridged

the opportunities of potential competitors, or that restrictive apprenticeship regulations cut down the number of jobs in many trades, these writers obviously were on solid ground.

We in our own day run the risk of a shortage of job opportunities from just such causes. The autocratic monarch who in seventeenth-century Europe granted to a few royal favorites a monopoly of the manufacture of salt or soap, or of the importation of wines or spices, is matched by our own American municipalities which banish peddlers from the streets or arbitrarily restrict the number of taxicab licenses. The lengthening of apprenticeship and the restriction in the number of apprentices, concerning which Adam Smith complained so bitterly, have many modern analogues: there is much evidence that labor unions have practiced restriction of entry into the building trades, and it has been charged that entrance into American medical schools has been limited in the interests of doctors' earnings. Whenever job opportunities are deliberately restricted in some occupations, pressure to find work in other occupations, which do not have such restrictions, is thereby increased.

Special privilege. Formerly the most important monopolies were granted by the king as an exercise of his sovereignty. The patent laws and some municipal franchises continue the tradition of government-created monopoly. But in our own day monopoly has become more and more, as we have seen, an outgrowth and concomitant of the growth in the size of the business unit. In this respect the situation has altered radically during the past century and a half. Here, above any place else, the basic assumption of the system of natural liberty breaks down. Whatever was the case in the eighteenth century, it is no longer true that *laissez faire* must lead automatically to a condition of universal competition between and among employers and workers, producers and consumers, none of whom has any special bargaining advantage. The antitrust movement represents a recognition of this fact and is the expression of a desire to achieve just such a condition of universal competition as that which it was formerly believed could be obtained through the system of natural liberty.

The flaw in the arguments put forward by the exponents of *laissez faire* was therefore their failure to recognize the powerful propensities of human beings for joint action. Groups within the state always have tried to secure bargaining advantages for themselves by using the machinery of the state to obtain an outright monopoly, or at least to limit competition. As public criticism made governments, and especially our own federal government, less willing to grant special privileges, group interests turned to the exercise of their bargaining power directly through their relationships in the market.

To derive a bargaining advantage without the support of special legal privilege, one must of course be very big indeed. Yet this is just what the trusts achieved. The growth in the scale of the business unit, initiated by the economies of large-scale production, was pressed further as a means of securing monopoly advantage. It is of course true that the attack upon the trusts was a response, not so much to their restriction of employment opportunity, as to their exploitation of the consumer. In any event, the antitrust movement was intended to secure those benefits of competition which had formerly been thought to flow automatically from a policy of *laissez faire*, of "hands off" by government.

The volume of spending. To a degree the employment question is part and parcel of the problem of special privilege. Yet it has other aspects also. We saw, on a more technical level of discussion in Chapter 31, that the total volume of employment in an economy is chiefly influenced by the aggregate level of spending—by consumers, by business for investment, and by government. Since we have taken classical doctrine for our starting point in the present chapter, it is pertinent to inquire how the level of spending might be determined under laissez-faire conditions, and why classical writers would have considered it absurd for any agency of government to assume responsibility for the adequacy of total spending.

We saw in our discussion of money and banking, particularly in Chapter 21, that the level of spending is much influenced by the volume of currency—and especially by the volume of bank deposits. In the eighteenth century—indeed, until very recent times—the amount of currency and credit outstanding, like many other things, was something about which it was nobody's business to worry. Indeed it would scarcely have been any use to ask questions about the adequacy of the money supply, for money meant gold and silver, and the mining of the precious metals was traditionally the preserve of relatively small-scale private enterprise. Moreover, the annual output of gold and silver was so small in comparison with the existing stock of these metals that even measures to stimulate mining scarcely could overcome a shortage, should one develop. Even the few pessimists who thought they foresaw a shortage of the precious metals were at a loss to recommend a remedy.

Today the situation is evidently quite otherwise. To an important extent the level of spending continues to depend upon the money supply, but the link between the amount of currency and credit outstanding on the one hand and the supply of gold and silver on the other has been neatly severed. Silver of course has been demonetized. In law, it is true, the gold at Fort Knox sets a certain maximum for the liabilities of the Federal Reserve

Banks; the most important of these liabilities are Federal Reserve notes and deposits of member banks with the Reserve Banks; the latter form in turn the cash reserves of member banks, and so set a maximum for customers' deposits.

Yet there is so much elasticity in the system, and the element of discretion is so large, that a bald statement of the law gives a totally false impression. In the first place, actual reserves ordinarily exceed required reserves, both for the member banks and for the Federal Reserve Banks themselves. In the second place, the Reserve Board has the power to vary the reserve requirements of member banks. In the third place, the law has frequently been changed, and it can easily be demonstrated that reserve requirements are what the legislators choose to make them.

In truth, the possibility of applying laissez-faire principles to the money supply and the level of spending disappeared early in the development of banking. Competitive banking led to the centralization of reserves in financial centers such as New York and London. The pyramiding of reserves had begun the divorce of the volume of credit from the gold supply long before 1913. The establishment of the Federal Reserve System completed the task and centralized the power of discretion.

We have not yet learned all there is to learn about the control of credit, nor to overcome its "inherent instability." The point is that in this particular we no longer have a choice between freedom and control. In order that money might be supplied by free enterprise without any centralized control, we would have to abolish banks and return to the universal use of hard money. Then its supply would be determined by the output of the mines, and not by any agency of government. But as things stand, government—or at least the Federal Reserve Board, which is a creature of government—cannot avoid following some definite policy in relation to the money supply. Even if the board decides not to intervene in the money market, to refrain from open-market purchases and sales, this very decision is a policy decision.

The realization that government is inevitably committed to policies, in the field of money and banking, which cannot but affect the level of employment has led to more extended proposals for employment planning. Especially if monetary mismanagement leads to unemployment, the responsibility to set matters right seems unequivocal. Yet, as we saw in Chapter 21, monetary devices lead all too easily to instability. This is why other measures, and especially fiscal policy, as seen in Chapter 31, recently have been invoked as aids toward the stabilization of employment. The fact that employment policy has tended to take in more and more territory should

not make us forget why the state originally became interested in control in this field. The reason is that a strict policy of *laissez faire* in regard to banking had long since been found impracticable.

LABOR-MANAGEMENT RELATIONS

A second area in which the conflict between freedom and control has become acute is the labor market. The classical doctrine is crystal clear. So long as no employer hired enough workers to derive a bargaining advantage merely from the size of his pay roll, competition for labor would insure to the worker the full value of his contribution to production: no worker could get more, but none need accept less. Since wage bargains were entered into voluntarily, the state should not interfere. Partial exceptions to this rule were allowed at an early date with respect to hours of work, especially of women (who were not supposed to be fully capable); and also with respect to health and safety. These side issues did not directly involve the wage bargain.

The bargaining aspect. The theory that wages really were fixed by free competition among equals outlived the reality; indeed it probably never was fully applicable. As so often happens, the philosophers described a world of their ideals, rather than the one in which they actually lived. At any rate by the middle of the nineteenth century the typical business might still be small, but it employed enough workers to enjoy a distinct bargaining advantage over them. Moreover, it was comparatively easy for employers in a certain town to get together and agree not to "spoil the market" by hiring workers away from each other. In this way the assumptions of the "obvious and simple system of natural liberty" were negated in a manner which gave an open invitation to workers to organize (as described in Chapter 15) in labor unions which placed their bargaining power once more on a level with that of employers.

On the whole, the size of the units buying labor increased more rapidly than the size of the units selling labor. Employers, too, for a long time were better organized, better financed and better supplied with legal and administrative talent, than were labor unions. Not until the 1930's could the bargaining power of the two sides once again be described as roughly equal. By that time the contrast with the ideal competitive labor market was complete. In many industries a single organization of employers faced a single labor union across the bargaining table; what the economists described as "bilateral monopoly" had arrived.

The restriction on freedom implied in this new set of institutions was clear. The small employer who could only survive by cutting corners was driven to the wall. Equally the worker who would willingly have worked for a few cents less was deprived of a chance to offer his services at that price, and might have to turn elsewhere for a job. The new dispensation, indeed, was particularly hard upon two types of workers: those who wished to enter highly organized trades but now found artificial obstacles in the way, and those in completely unorganized trades who were now joined by persons excluded from organized trades. There was little that the state could do to succor those who suffered under the new regime, for it was plainly beyond the power of government to bring back the decentralized and atomistic labor market of a former day, even had there been sentiment for such a reversal of history.

The legal aspect. The conflict between freedom and control lay elsewhere. It was soon found that the common law provided a wholly inadequate background for the new collective bargaining which appeared in the labor market. The reason was that the broad and often vague principles embodied in the common law gave rise to sharply conflicting results when applied in the labor market. These difficulties were most obvious in the case of injunctions in labor disputes, where the legal principles to be applied were variously interpreted by different courts, and often appeared to inflict great hardship upon labor unions and their members. Pressure consequently arose for legislation to clarify the rights and duties of those engaged in collective bargaining and in labor disputes. By the thirties the task of furnishing the labor market with a statutory framework could be shirked no longer. Once again the basic assumptions underlying the system of natural liberty had melted away, and in consequence a strict policy of *laissez faire* was no longer attractive. The pressure for state interference came from two powerful economic groups—labor and management—each of which naturally hoped to turn legislation to its own advantage. As so often happened, the economic conflict was partly transferred to the political plane.

In framing labor legislation it was no more possible for Congress to be impartial than it had been for the courts, when they applied the common law to labor disputes. But lawmaking by Congress at least had the advantage that it produced a uniform code derived from a consensus of opinion. Because the courts had tilted the balance against labor, it was natural that the early legislation (La Guardia and Wagner Acts) should seek to redress that balance and should appear to favor labor. The Taft-Hartley Act redressed the balance in favor of the employer, but it cannot be said

that the aggregate of congressional action—in passing, amending, and repealing particular laws—has yet erected a satisfactory legislative framework.

From the viewpoint of the conflict between freedom and control, the kind of regulation imposed is of greater interest than the exact locus of the point of balance achieved between the interests of the two groups. The resolution of the struggle between labor and management on the political plane has resulted, as we saw in Chapter 15, in the construction of an elaborate quasi-judicial framework for enforcing the prescribed code of behavior, with respect both to regular day-to-day bargaining and to actual disputes. The employer's freedom is restricted in numerous respects; his right to hire and fire is limited, he must not indulge in specified "unfair practices," and he is compelled to bargain with a specified union. The worker's freedom is restricted also: he can be prevented from striking and he can also be forced to pay union dues.

As a matter of public policy, it is not yet entirely clear what the objectives of control in the labor market are, nor what advantages are expected to accrue from the loss of freedom implicit in this control. For the truth is that the labor legislation of the past two decades represents the result of a struggle between two rival economic groups to use political power as a means of obtaining economic advantages. The primary desire of the nation at large in considering such legislation is sometimes said to be that it should lead to industrial peace. Indeed within the past few years disputes have led to large losses of output, much inconvenience, and some hardship. And yet there are many other possible objectives of control which have received thus far much less attention. We could aim, for instance, at labor legislation which would stimulate industrial productivity, which would enhance the status of the individual worker within his union, which would make racial discrimination more difficult, or which would define more clearly what functions belong to management and what do not. But enough has been said to indicate that our application of control in this field to date has been haphazard, and has been motivated less by a consideration of the public welfare than by the desires of two powerful economic groups.

ECONOMIC RELATIONS WITH OTHER COUNTRIES

Trading relations between this and other nations represent a third problem area in which a satisfactory balance between freedom and control has not yet been achieved. The importance of clear thinking about the question is apparent, if we ask ourselves whether the relation of our eco

omy to the economies of other nations is to be one of co-operation or one of conflict.

Co-operation and conflict, like peace and war, are not absolutes. But they do reflect a degree of compatibility or of incompatibility between the domestic affairs of particular countries and the conditions in the international environment. There are only two consistent lines of policy: (1) a nation may seek to adjust its internal affairs so that they accord with harmonious and co-operative international relations, or (2) it may make its relations with foreign nations and foreign markets conform with what it believes to be its domestic interests. The second line of policy is the one that has been followed in the past by the principal industrial nations. The recent attempts of Germany, Italy, and Japan to force conformity upon other nations by conquest is simply the most dramatic and extreme form that this line has taken.

Actually, however, it has only been the extreme policies pursued by nations in the past that has created so sharp a distinction between lines of policy. Certainly, in the case of the United States, there is no necessity for a cleavage between our domestic interests and our international interests. Given the resources and the specialized abilities that we have, given the existing structure of our productive system, given the widespread interest that Americans have in steadily rising living standards for all elements of our people, it follows that we must import goods and export goods in large quantities, and carry on other kinds of transactions with foreign countries. It follows further that our domestic interests and our international interests are intertwined, that their separation for purposes of policy is fallacious, and that such separation may lead to action that endangers our economic welfare.

Let us proceed, as we did in the two previous areas of conflict between freedom and control, with an examination of the classical doctrines that dealt with this subject. The exponents of the "obvious and simple system of natural liberty" were clearly of the opinion that laissez-faire principles should be applied to international as well as to domestic trade, and for substantially the same reasons. They argued, that is to say, that a nation will specialize in the production of those things for which it is best fitted if individual merchants are allowed to import and export in complete freedom. The self-interest of competing nations, and of competing individuals within each nation, would naturally cause all concerned to buy in the cheapest market and sell in the dearest. Such self-interest would, at the same time, have the eminently desirable result that everybody—both nations and individuals—would make bargains satisfactory to themselves, and the most ef-

ficient international division of labor would be encouraged. In addition, competition would prevent large and economically important nations from pressing home advantages of size, making use of possibly superior bargaining power, and exploiting smaller or economically weaker nations. For all these reasons, so classical writers argued, foreign trade should be left free and uncontrolled in the hands of individual merchants.

Yet even a nation, such as the United States, that ranks relatively high in economic self-sufficiency, is easily tempted in times of large-scale unemployment to erect barriers against imports and to try to stimulate exports. Tariffs, import-quota systems, export bounties, and currency devaluation are devices by which nations seek to bolster internal spending (which encourages domestic employment) and to cut down external spending (which merely employs foreigners). In this manner a nation may export unemployment to foreign countries. A strong nation can, for short periods of time, benefit from such policies. In the long run, however, its losses are almost certain to exceed its gains. This is so because the cut in its imports eventually reduces the market for its exports, for the international balance out of which payments are made dry up and will not long permit a nation to go on selling goods abroad without buying goods abroad. It also has been demonstrated that barriers against imports and subsidies to export created by one nation provoke retaliatory action by other nations. Moreover, the general intensification of depressed conditions in all nations, with widespread strangulation of trade and defaults in payments, makes recovery more difficult in each nation.

Restriction reaches its most advanced point when trade between countries is reduced to barter. The "bilateral trade agreements" that existed between Hitler's Reich and most of the countries of southeastern Europe are examples of such barter; they exemplify, too, the ruthless exploitation of small countries by a large one that is made possible by such methods. When a nation centralizes its foreign trade in the hands of some government agency, it achieves a degree of bargaining power comparable to that obtained through any other form of group action in the market. The advantages to be derived from monopolistic policies of this kind are of course severely limited by risks of retaliation. The British monopoly of natural rubber encouraged the use of substitutes; "dumping" of exports on world markets by the Russians during the 1930's provoked countervailing duties.

Restrictions of commerce among nations feed upon themselves; one important commercial nation establishes them, other nations feel compelled to take similar action. The United States has not restricted trade as drastically as some other nations have; Hitler's Reich may be cited as

extreme modern example. But, for the immediate future, it should be clearly recognized that the place of this country looms so large in world affairs that the effects of its actions to restrict or to promote world commerce will be vastly greater than those of similar actions in the years before World War II. And, as for the past, we have erected monuments to restriction in the Fordney-McCumber Tariff of 1922 and the Smoot-Hawley Tariff of 1930. All of the various restrictive devices are designed either to reduce imports or to increase exports; one of them, currency devaluation, is designed to do both of these things.

Does it follow from this that exports are more important than imports to domestic prosperity and employment? John Stuart Mill argued a century ago that, because people in each nation sold abroad goods they produced *most* advantageously and bought abroad goods they produced *least* advantageously, "the benefit to each nation from foreign trade lies in its imports." With the industrial development that has occurred between Mill's time and our own, the same conclusion can be reached on other, more empirical, grounds. The more complex our industrial products and methods come to be, the more varied the materials—many of them imported materials—that are used. Their strategic importance is suggested by a moment's reflection on the effects that a stoppage of manganese imports would have on our steel industry and on the industries that depend on steel. Both exports and imports are necessary to domestic prosperity and a high level of employment; we cannot have one without the other.

Our understanding of this is important also to any consideration of the stable balance of our domestic economy. Proponents of protective tariffs and other devices of economic isolation sometimes have argued that foreign trade is of only moderate importance because, in "normal" times, our exports amount to only about 10 per cent of our total volume of commerce. The other 90 per cent moves, of course, in domestic channels. Yet, from what has been said, it should be clear that the elimination of exports (and, more importantly, of the imports for which our exports pay) would make a difference of much more than 10 per cent to the volume of both our commerce and our production.

It cannot be too strongly stressed that the kind of balance we Americans establish between economic freedom and control in the international sphere will have a determining influence, in this postwar era, on another balance that must, and will, be struck. That is the balance of the world economy itself. On this balance will depend each country's prosperity and employment, and also the quality of its relations with other countries. On it depends whether there will be harmonious international relations, or ruthless

struggle among conflicting groups of nations. Because the weight of our country is so heavy in the scales of our time, there rests with us a special responsibility to lead the major trading nations toward sanity. These issues have been clearly recognized in United States policy toward the International Trade Organization, an instrumentality of the United Nations. At Geneva in 1947 and at the Havana Conference in 1948, our government pressed for agreements against obstacles to private trade between nations. In the case of countries whose governments partially or entirely monopolized their foreign trade, the United States urged agreements renouncing the use of monopoly power in international dealings.

THE EMERGENCE OF POLITICAL ECONOMY

We have deliberately refrained in this book from focusing attention on policy issues as such. The preceding chapters have been written as a contribution to the understanding of the processes whereby, and the institutions through which, the American economy operates. Naturally and inevitably as we examined the role of the state in economic affairs, and as we observed the circumstances and aspirations of various groups within the economy, issues of policy came to the fore. In the preceding pages of this final chapter we have focused on outstanding policy issues to illustrate the basic conflict between freedom and control in our present-day economy. Certainly the problem of balance between freedom and control transcends any discussion of economic processes or institutions. For it raises basic political and philosophical issues which go far beyond the operation of our economy, issues at which we can only hint in this place.

The range of problems to which we refer occupies the borderline between economics on the one side and politics on the other. It was a wise instinct which made the early economists name their discipline "political economy," for they knew that any serious discussion of economic affairs was likely to end up in a debate over issues of policy, perhaps even over political ways and means. Although it has become fashionable in modern times to separate the study of economic processes from the study of political institutions, it is obvious that many of the questions asked by economists fall within the area in which political scientists work. Some indeed may well be referred to philosophers. And some may still go unanswered even by the specialists—of whatever kind they may be.

It is very noticeable that each of the three conflicts between freedom and control discussed in this chapter owes its origin to the existence of monopoly in one form or another. The employment problem was affected

by more than one kind of monopoly—the monopoly of specific occupations by existing vested interests on the one hand, and the monopoly over the creation of purchasing power possessed by government on the other. The second conflict discussed—labor-management relations—exhibits the problem of power resulting from the appearance of bilateral monopoly in the labor market. Into the third conflict, also, monopoly enters in more than one form. On the one hand is the range of problems which arise because domestic producers claim a monopoly of the domestic market; on the other are the difficulties which result when a state decides to monopolize its entire foreign trade.

Evidently in our modern economy monopoly extends far beyond what we think of as the trust problem. In fact, the issue of monopoly emerges wherever an economic group is able to enhance its bargaining power by some kind of collective action. Sometimes the group acts independently in the market, by excluding competitors and exploiting its bargaining superiority over those from whom it buys and those to whom it sells. The traditional trust or combine is an example of such a group. Generally, the political atmosphere is unsympathetic toward such groups, and—unless they can disguise their nature—they can hope for few privileges at the hands of the state.

Other groups are able to buttress their monopoly position in the market by successfully demanding special privileges from the state. It has been said, at different times, that both management and labor have obtained such favors. Certainly, at one time or another, political action has given great advantage to such different groups as farmers, silver miners, and merchantship owners. Not all these groups were able to acquire a monopoly in the market, even with the help of favorable legislation. Some of them have indeed used special privilege dispensed by Congress to fortify and consolidate a market monopoly: labor unions and farmers are examples.

Other groups have found a more profitable use for political power in a raid on the public treasury, and have not needed—or have not bothered—to secure legislation to bolster their position in the market: the silver interests and the merchant marine fit into this category. The special interests which have found the tariff most helpful occupy an intermediate position: the copper mining interests of Arizona, Utah, and Montana have been satisfied to exclude foreign copper from their market but have not seriously attempted to eliminate domestic competition. It is evident that the results of freedom have not been entirely happy; while on the other hand the political potentialities of group action have led to some very peculiar forms of control.

What should be done? Certainly it is the function of political economy to diagnose. Frequently the economist can indicate how a given outcome, unexpected and often unintended, has been brought about. Often he can show how policies proposed are likely to defeat their own ends. Both of these functions of economists have been given some attention in this book. We hope, too, that it has been sufficiently shown that whatever economic goals we may attain in the future must be reached by going ahead from where we now stand.

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